

**ThinkCentre**

**Hardware Maintenance Manual**

**Types 8084, 8085, 8126, 8147, 8148, 8149**

**Types 8174, 8175, 8176, 8177, 8178, 8179**



**ThinkCentre**

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**Types 8084, 8085, 8126, 8147, 8148, 8149**

**Types 8174, 8175, 8176, 8177, 8178, 8179**

**Note:** Before using this information and the product it supports, be sure to read the information under “Notices,” on page 219.

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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 5.

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/think/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.

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## Strategy for replacing FRUs for CTO, CMV, and GAV products

### Product definition

#### Dynamic Configure To Order (CTO)

This provides the ability for a customer to configure a Lenovo solution from an eSite, and have this configuration sent to fulfillment, where it is built and shipped directly to the customer. The machine label, PC Entitlement Warehouse (PEW), eSupport, and the HMM will include these products as the 4-digit machine type (MT) and 3-digit model, where model = 'CTO' (Example: 8129-CTO).

#### Custom Model Variant (CMV)

This is a unique configuration that has been negotiated between Lenovo and the customer. A unique 4-digit MT and 3-digit model is provided to the customer to place orders (Example: 8129-W15). A CMV is a special bid offering. Therefore, it is NOT generally announced.

- The machine type model (MTM) portion of the machine label is the 4-digit MT and 3-digit model, where model = 'CTO' (Example: 8129-CTO). The PRODUCT ID portion of the machine label is the 4-digit MT and 3-digit CMV model (Example: 8129-W15).
- The PEW record is the 4-digit MT and 3-digit model, where model = 'CTO' (Example: 8129-CTO).
- eSupport will show both the CTO and CMV machine type models (Example: 8129-CTO and 8129-W15 will be found on the eSupport site.)
- The HMM will have the 4-digit MT and 3-digit CTO model only (Example: 8129-CTO). Again, CMVs are custom models and are not found in the HMM.

#### General Announce Variant (GAV)

This is a standard model (fixed configuration). GAVs are announced and offered to all customers. The MTM portion of the machine label is a 4-digit MT and 3-digit model, where model = a "fixed model number", not 'CTO' (Example: 8129-F1U). Also, PEW, eSupport, and the HMM will list these products under the same fixed model number.

### FRU Identification for CTO, CMV, and GAV products

There are three information resources to identify which FRUs are used to support CTO, CMV, and GAV products. These sources are PEW, eSupport, and the HMM.

#### Using PEW

- PEW is the primary source for identifying FRU part numbers and FRU descriptions for the key commodities for CTO, CMV and GAV products at a MT - serial number level. An example of key commodities are hard disk drives, system boards, microprocessors, Liquid Crystal Displays (LCDs), and memory.
- Remember, All CTO and CMV products are loaded in PEW under the 4-digit MT and 3-digit model, where model = 'CTO' (Example: 8129-CTO). GAVs are loaded in PEW under the 4-digit MT and 3-digit model, where model = a "fixed model number", not 'CTO' (Example: 8129-F1U).
- PEW can be accessed as follows:
  1. Point your browser to <http://w3-3.ibm.com/pc/entitle>.
  2. Under PEW Home, click **Machine Lookup**.
  3. Under Machine Lookup, click **Warranty Information**.

4. Under Warranty Information, type the MT and Serial number and click **Submit**.

The list of key commodities is returned in the PEW record under Component Information.

- **Business Partners** using Eclaim will access PEW when performing Entitlement Lookup. Business Partners will enter Loc ID, MT and Serial, and the key commodities will be returned in the Eclaim record under System Details.
- Authorized Lenovo Business Partners can access Eclaim at the following Web site:  
<http://wca.eclaim.com>

## Using eSupport

### For Key Commodities (Examples - hard disk drive, system board, microprocessor, LCD, and memory)

- eSupport can be used to view the list of key commodities built in a particular machine serial (this is the same record found in PEW).
- eSupport can be accessed at the following Web site:  
<http://www.lenovo.com/think/support>
- To view the key commodities:
  1. Click **Parts information**.
  2. Under Parts information, click **Parts lookup**.
  3. Under Parts lookup, type the model type and serial number; then click **Continue**.

The key commodities are returned in the eSupport record under Parts shipped with your system.

### For the remaining FRUs (the complete list of FRUs at the MT Model level)

- eSupport can be used to view the complete list of FRUs for a machine type and model.
- To view the complete list of FRUs for a machine type:
  1. Point your browser to <http://www.lenovo.com/think/support>.
  2. Type the machine type (Example: 8129) in the Use Quick Path field; then click **Go**.
  3. Under Browse by product, click **Continue**.
  4. Under Important information, click **Parts information**.
  5. In the Refine results field, select **Service parts**; then click the entry for your machine type.

The list of service parts by description, with applicable machine type model and FRU part number is displayed.

## Using the HMM

- Use the HMM as a back-up to PEW and eSupport to view the complete list of FRU part numbers at the MT Model level.

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## 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.

Related Web URLs are:

- Lenovo information for Suppliers website:  
<http://www-03.ibm.com/procurement/proweb.nsf/ContentDocsByTitle/United+States~Information+for+suppliers>
- RoHS Directive:  
[http://europa.eu.int/eur-lex/pri/en/oj/dat/2003/l\\_037/l\\_03720030213en00190023.pdf](http://europa.eu.int/eur-lex/pri/en/oj/dat/2003/l_037/l_03720030213en00190023.pdf)
- California Senate Bills 20, 50:  
<http://www.ciwmb.ca.gov/HHW/Events/AnnualConf/2004/presentation/MPaparian.pdf>

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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.

---

## 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.

---

## 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.

---

## 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)

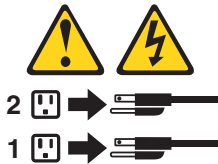
**CAUTION:**

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.



**CAUTION:**

Do not place any object weighing more than 82 kg (180 lbs.) on top of rack-mounted devices.





## خطر

التيار الكهربائي الموجود بمصدر الطاقة أو أجهزة التليفون أو أسلاك الاتصالات يشكل خطورة.

لتنقادي 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.

### 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.

### 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.



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 .



تنبيهه :  
لا تضع أي عنصر يزن أكثر من ٨٢ كيلوجرام (١٨٠ رطل) أعلى سطح الأجهزة.







## 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)

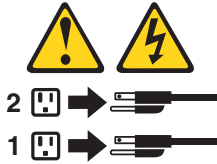
#### **CUIDADO:**

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.



**CUIDADO:**

Não coloque nenhum objeto com mais de 82 kg (180 lbs.) sobre dispositivos montados em rack.





#### 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。





警告:

切勿在机架安装设备的顶部放置任何重量超过 82 千克（180 磅）的物体。





#### 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。



警告：  
請勿堆放重量超過 **82 公斤 (180 磅)** 的物體於框架裝載式裝置上。







## 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
1. Mettez les unités HORS TENSION.	1. Mettez les unités HORS TENSION.
2. Commencez par brancher tous les cordons sur les unités.	2. Débranchez les cordons d'alimentation des prises.
3. Branchez les câbles d'interface sur des connecteurs.	3. Débranchez les câbles d'interface des connecteurs.
4. Branchez les cordons d'alimentation sur des prises.	4. Débranchez tous les câbles des unités.
5. Mettez les unités SOUS TENSION.	



**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.



**ATTENTION:**

Ne placez pas d'objet supérieur à 82 kg sur une unité montée en armoire.





## 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.



**ACHTUNG:**

Legen Sie auf in einem Rack montierten Einheiten keine über 82 kg schweren Gegenstände ab.





#### 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 ליזר (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.

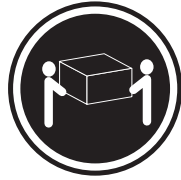


סכנה

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, ודאו שכל כבלי החשמל מנותקים ממקור החשמל.



2



1



זהירות:

אל תניחו חפץ כלשהו השוקל יותר מ-82 ק"ג (180 ליב') על התקנים המחוברים למעמד מסגרת.





## 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.



**ATTENZIONE:**

Non collocare oggetti che pesano più di 82 kg (180 lb.) sulla parte superiore delle unità montate nel rack.





**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.





주의:

랙 마운트 장치 위에 무게가 82 kg (180 lbs.) 이상인 물체를 올려 두지 마십시오.





## 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.



**PRECAUCIÓN:**

No coloque ningún objeto que pese más de 82 Kg (180 lb) encima de dispositivos montados en un bastidor.



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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 Access IBM program

Use the Access IBM<sup>®</sup> program for general information about the use, operation, and maintenance of the computer. The Access IBM program also contains information to help solve problems and get repair service or other technical assistance. The Access IBM 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/think/support/>.

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### Physical specifications

This section details the physical specifications for each computer Type.

## Types 8126, 8174, 8175, and 8176

<p><b>Dimensions</b></p> <p>Height: 398 mm (15.67 in.)</p> <p>Width: 180 mm (7.08 in.)</p> <p>Depth: 402 mm (15.82 in.)</p> <p><b>Weight</b></p> <p>Minimum configuration as shipped: 7.6 kg (16.8 lb)</p> <p>Maximum configuration: 9.97 kg (22 lb)</p> <p><b>Environment</b></p> <p>Air temperature:</p> <p>System on: 10° to 35°C (50° to 95° F)</p> <p>System off: 10° to 43°C (50° to 110° F)</p> <p>Maximum altitude: 2134 m (7000 ft)</p> <p><b>Note:</b> The maximum altitude, 2134 m (7000 ft), is the maximum altitude at which the specified air temperatures apply. At higher altitudes, the maximum air temperatures are lower than those specified.</p> <p>Humidity:</p> <p>System on: 8% to 80%</p> <p>System off: 8% to 80%</p> <p><b>Electrical input</b></p> <p>Input voltage:</p> <p>Low range:</p> <p>Minimum: 90 V ac</p> <p>Maximum: 180 V ac</p> <p>Input frequency: 50/60 Hz</p> <p>Voltage switch setting: 115 V ac</p> <p>High range:</p> <p>Minimum: 137 V ac</p> <p>Maximum: 265 V ac</p> <p>Input frequency: 50/60 Hz</p> <p>Voltage switch setting: 230 V ac</p> <p>Input kilovolt-amperes (kVA) (approximate):</p> <p>Minimum configuration as shipped: 0.08 kVA</p> <p>Maximum configuration: 0.30 kVA</p> <p><b>Note:</b> Power consumption and heat output vary depending on the number and type of optional features installed and the power-management optional features in use.</p>	<p><b>Heat output</b> (approximate) in British thermal units (Btu) per hour:</p> <p>Minimum configuration: 257 Btu/hr (75 watts)</p> <p>Maximum configuration: 785 Btu/hr (230 watts)</p> <p><b>Airflow</b></p> <p>Approximately 0.68 cubic meters every minute (24 cubic feet every minute) maximum</p> <p><b>Acoustical noise-emission values</b></p> <p>For microprocessors less than 2.8 GHz:</p> <p>Average sound-pressure levels:</p> <p>At operator position:</p> <p>Idle: 28 dBA</p> <p>Operating: 35 dBA</p> <p>At bystander position - 1 meter (3.3 ft):</p> <p>Idle: 25 dBA</p> <p>Operating: 33 dBA</p> <p>Declared (upper limit) sound-power levels:</p> <p>Idle: 4.0 bels</p> <p>Operating: 4.7 bels</p> <p>For microprocessors greater than or equal to 2.8 GHz:</p> <p>Average sound-pressure levels:</p> <p>At operator position:</p> <p>Idle: 33 dBA</p> <p>Operating: 35 dBA</p> <p>At bystander position - 1 meter (3.3 ft):</p> <p>Idle: 30 dBA</p> <p>Operating: 33 dBA</p> <p>Declared (upper limit) sound-power levels:</p> <p>Idle: 4.4 bels</p> <p>Operating: 4.7 bels</p> <p><b>Note:</b> These levels were measured in controlled acoustical environments according to the procedures specified by the American National Standards Institute (ANSI) S12.10 and ISO 7779 and are reported in accordance with ISO 9296. Actual sound-pressure levels in a given location might exceed the average values stated because of room reflections and other nearby noise sources. The declared sound-power levels indicate an upper limit, below which a large number of computers will operate.</p>
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## Types 8149, 8177, and 8178

<p><b>Dimensions</b></p> <p>Height: 140 mm (5.5 in.)  Width: 425 mm (16.7 in.)  Depth: 425 mm (16.7 in.)</p> <p><b>Weight</b></p> <p>Minimum configuration as shipped: 10.0 kg (22 lb)  Maximum configuration: 11.4 kg (25.0 lb)</p> <p><b>Environment</b></p> <p>Air temperature:  System on: 10° to 35°C (50° to 95° F)  System off: 10° to 43°C (50° to 110° F)  Maximum altitude: 2134 m (7000 ft)  <b>Note:</b> The maximum altitude, 2134 m (7000 ft), is the maximum altitude at which the specified air temperatures apply. At higher altitudes, the maximum air temperatures are lower than those specified.</p> <p>Humidity:  System on: 8% to 80%  System off: 8% to 80%</p> <p><b>Electrical input</b></p> <p>Input voltage:  Low range:  Minimum: 90 V ac  Maximum: 180 V ac  Input frequency: 50/60 Hz  Voltage switch setting: 115 V ac  High range:  Minimum: 137 V ac  Maximum: 265 V ac  Input frequency: 50/60 Hz  Voltage switch setting: 230 V ac</p> <p>Input kilovolt-amperes (kVA) (approximate):  Minimum configuration as shipped: 0.08 kVA  Maximum configuration: 0.3 kVA</p> <p><b>Note:</b> Power consumption and heat output vary depending on the number and type of optional features installed and the power-management optional features in use.</p>	<p><b>Heat output</b> (approximate) in British thermal units (Btu) per hour:  Minimum configuration: 257 Btu/hr (75 watts)  Maximum configuration: 785 Btu/hr (230 watts)</p> <p><b>Airflow</b></p> <p>Approximately 0.51 cubic meters per minute (18 cubic feet per minute) maximum</p> <p><b>Acoustical noise-emission values</b></p> <p>Average sound-pressure levels:  At operator position:  Idle: 30 dBA  Operating: 32 dBA  At bystander position - 1 meter (3.3 ft):  Idle: 26 dBA  Operating: 30 dBA</p> <p>Declared (upper limit) sound-power levels:  Idle: 4.0 bels  Operating: 4.3 bels</p> <p><b>Note:</b> These levels were measured in controlled acoustical environments according to the procedures specified by the American National Standards Institute (ANSI) S12.10 and ISO 7779 and are reported in accordance with ISO 9296. Actual sound-pressure levels in a given location might exceed the average values stated because of room reflections and other nearby noise sources. The declared sound-power levels indicate an upper limit, below which a large number of computers will operate.</p>
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## Types 8084, 8085, 8147, 8148, and 8179

<p><b>Dimensions</b></p> <p>Height: 413 mm (16.25 in.) Width: 191 mm (7.5 in.) Depth: 406 mm (16 in.)</p> <p><b>Weight</b></p> <p>Minimum configuration as shipped: 9.1 kg (20 lb) Maximum configuration: 11.4 kg (25.0 lb)</p> <p><b>Environment</b></p> <p>Air temperature: System on: 10° to 35°C (50° to 95° F) System off: 10° to 43°C (50° to 110° F) Maximum altitude: 2134 m (7000 ft) <b>Note:</b> The maximum altitude, 2134 m (7000 ft), is the maximum altitude at which the specified air temperatures apply. At higher altitudes, the maximum air temperatures are lower than those specified.</p> <p>Humidity: System on: 8% to 80% System off: 8% to 80%</p> <p><b>Electrical input</b></p> <p>Input voltage: Low range: Minimum: 90 V ac Maximum: 180 V ac Input frequency: 50/60 Hz Voltage switch setting: 115 V ac High range: Minimum: 137 V ac Maximum: 265 V ac Input frequency: 50/60 Hz Voltage switch setting: 230 V ac</p> <p>Input kilovolt-amperes (kVA) (approximate): Minimum configuration as shipped: 0.08 kVA Maximum configuration: 0.3 kVA</p> <p><b>Note:</b> Power consumption and heat output vary depending on the number and type of optional features installed and the power-management optional features in use.</p>	<p><b>Heat output</b> (approximate) in British thermal units (Btu) per hour: Minimum configuration: 257 Btu/hr (75 watts) Maximum configuration: 785 Btu/hr (230 watts)</p> <p><b>Airflow</b></p> <p>Approximately 0.68 cubic meters per minute (24 cubic feet per minute) maximum</p> <p><b>Acoustical noise-emission values</b></p> <p>Average sound-pressure levels:</p> <p>At operator position: Idle: 28 dBA Operating: 30 dBA</p> <p>At bystander position - 1 meter (3.3 ft): Idle: 26 dBA Operating: 29 dBA</p> <p>Declared (upper limit) sound-power levels: Idle: 4.1 bels Operating: 4.3 bels</p> <p><b>Note:</b> These levels were measured in controlled acoustical environments according to the procedures specified by the American National Standards Institute (ANSI) S12.10 and ISO 7779 and are reported in accordance with ISO 9296. Actual sound-pressure levels in a given location might exceed the average values stated because of room reflections and other nearby noise sources. The declared sound-power levels indicate an upper limit, below which a large number of computers will operate.</p>
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## 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.

### Notes:

- The default is for this computer to boot up in quiet mode (no beep, no memory count and checkpoint code display) when no errors are detected by POST.
- To enable beep, memory count, and checkpoint code display when a successful POST occurs, do the following:
  1. Start the Setup Utility program. See “Starting the Setup Utility program” on page 55.
  2. Select **Start Options**.
  3. Set **Power-On Self-Test** to **Enhanced**.
- 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 214.

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 8 on page 46.
6. Look at the following conditions and follow the instructions:
  - If you hear beep codes during POST, go to “Beep symptoms” on page 82.
  - If the computer displays a POST error, go to “POST error codes” on page 85.
  - If the computer hangs and no error is displayed, continue at step 7.
7. There are three LEDs to help you determine if the power supply and system board are working correctly. A power button LED is located on the front of the computer and two diagnostic LEDs are located on the power supply at the rear of the computer.
  - a. Disconnect the power cord from the electrical outlet.
  - b. Reconnect the power cord to a working electrical outlet.
  - c. Press the power button.

d. Observe the LEDs and refer to the following table.

Power LED	Green diagnostic LED	Yellow diagnostic LED	Action
ON	ON	OFF	This is the normal condition of the LEDs when the power is OK.
OFF	OFF	OFF	Make sure the power cord is attached to a working electrical outlet.  If the electrical outlet is OK, replace the power supply.
OFF (after the power button has been pressed)	ON	OFF	Replace the system board
ON	ON	ON	Replace the power supply

If the Diagnostic LEDs are in the normal condition and the problem persists, replace the system board and the microprocessor, one at a time, until the computer works correctly.

8. Run the Diagnostic programs. See Chapter 5, "Diagnostics using PC-Doctor for DOS," on page 49.
  - If you receive an error, replace the part that the diagnostic program calls out or go to "Diagnostic error codes" on page 61.
  - 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 Diagnostics Diskette (version)
7. Have the same configuration options set in the system
8. Have the same setup for the operation 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 using PC-Doctor for DOS

Diagnostics are provided by the PC-Doctor program for DOS. These include a full range of diagnostic utilities to determine the operating condition of the computer's hardware components.

You can run diagnostics from the Rescue and Recovery™ workspace or you can create a bootable diagnostic diskette from the Rescue and Recovery workspace. Alternatively, you can download either a diskette image or a startable CD-ROM image (.iso file) from the Customer Support Web site and run diagnostics using them.

The latest version of the diagnostics program is available from <http://www.lenovo.com/think/support> on the World Wide Web. Type your machine type into the **Use Quick path** field and click **Go** to find the downloadable files that are specific to the computer. See "Diagnostics program download" on page 50.

Diagnostic error messages appear when a test program finds a problem with a hardware option. For the test programs to properly determine if a test *Passed*, *Failed* or *Aborted*, the test programs check the error-return code at test completion. See "Diagnostic error codes" on page 61.

If an installed device is not recognized by the diagnostics program, that device might be defective.

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### Starting PC-Doctor from the Rescue and Recovery workspace

This procedure describes how to start PC-Doctor from the Rescue and Recovery workspace.

1. If your computer is already on when you start this procedure, shut down the operating system and turn off the computer.
2. To launch the Rescue and Recovery workspace, repeatedly press the F11 key as you turn on the computer.

**Note:** If a user password or an administrator password has been set, the Rescue and Recovery workspace is not displayed until you type the password.

3. When the Rescue and Recovery workspace is displayed, look for "Troubleshoot" on the left side of the screen. Click **Diagnose hardware**.

**Notes:**

- a. Additional diagnostic information is available from the Rescue and Recovery workspace, such as a diagnostic overview. Refer to the Rescue and Recovery help system for details.
- b. After selecting Diagnose hardware, make sure the computer is restarted using the restart button on the Rescue and Recovery workspace. Do not use the power switch to start the reboot.
- c. You can also create a set of diagnostic disks from the Rescue and Recovery workspace by clicking **Create diagnostic disks** from the Rescue and Recovery menu.

---

## Starting PC-Doctor from a diagnostic diskette or CD-ROM

**Note:** If your computer has no internal diskette drive, an external USB diskette drive is required when using the diagnostic diskette.

1. If your computer is already on when you start this procedure, shut down the operating system and turn off the computer.
2. Insert the diskette or CD-ROM in the appropriate drive.
3. Turn on the computer.

**Note:** If the PC-Doctor program fails to start, make sure that the startup device sequence is configured to allow startup from the diskette or CD-ROM drive. See "Selecting a startup device" on page 58.

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## Diagnostics program download

If you have access to the internet, you can download a diskette image or a startable CD-ROM image (.iso file) of the diagnostics.

To download the latest diagnostics program from the WWW, do the following:

- Go to <http://www.lenovo.com/think/support>.
- Type the machine type in the "Use Quick Path" field and click **Go**.
- Click **Downloads and drivers** and scroll down to locate the Enhanced diagnostics.

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## 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 diagnostics 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. See "Test selection" on page 51.
- From within a test category, press **Ctrl-Enter** to automatically run only the selected tests in that category. See "Test selection" on page 51.
- 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 54.

## Test selection

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 Code	Failure Type	DeviceID	Date	ChkDigits	Text
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- **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 61 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

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

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:**

- *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.

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

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.



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## Chapter 6. Using the Setup Utility

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

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### 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. Repeatedly press the F1 key as you turn on the computer.

**Notes:**

- a. If a password has been set, the Setup Utility program menu is not displayed until you type your password. See “Using passwords” for more information.
- b. BIOS settings cannot be changed without the correct password.
- c. The Setup Utility might start automatically when the power-on self-test (POST) detects that hardware has been removed or new hardware has been installed in your computer.

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### 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.

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### 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, press F10.

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### 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 types of passwords used are:

- User Password
- Administrator Password
- IDE Drive User Password (some computers)
- IDE Drive Master Password (some computers)

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

If you are setting any of the various types of passwords on your computer, you should read and understand the following information:

- If you type an incorrect password, you will see an error message. If you type an incorrect password three consecutive times, you must turn the computer off and start again.
- If you set both a User Password and an IDE Drive User Password to the same string, you will be prompted for the password only once when you turn on your computer.
- Do not move an internal IDE hard disk drive to another computer if an IDE Drive User Password has been set unless that computer also supports the IDE Drive User Password.
- If your computer is connected to a local area network (LAN), Wake on LAN will not work unless both a User Password and an IDE Drive User Password are set using the same 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 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.

## IDE Drive User Password

The IDE Drive User Password, used on some computers, is used to protect the data on the IDE hard disk drive(s). When this password is set, you are prompted to type a valid password before any hard disk drive can be used. This prompt is displayed each time you turn on your computer. If your computer has multiple hard disk drives, they all must use the same password.

### Attention

If an IDE Drive User Password is set but the IDE Drive Master Password is not set, there is no recovery in the event that the IDE Drive User Password is lost or forgotten. The hard disk drive must be replaced. See "IDE Drive Master Password."

## IDE Drive Master Password

The IDE Drive Master Password, used on some computers, is used to recover use of the hard disk drive in the event that the IDE Drive User Password is lost or forgotten. Only the person who knows the IDE Drive Master password can reset the IDE Drive User Password.

**Attention**

Make sure that the IDE Drive Master password is stored in a safe place. If both the IDE Drive User password and the IDE Drive Master password are lost or forgotten, the IDE hard disk drive must be replaced.

If both the IDE Drive User Password and the IDE Drive Master Password are to be set, the IDE Drive Master Password must be set before setting the IDE Drive User 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 seven characters (A- Z, a-z, and 0-9).

1. Start the Setup Utility program (see “Starting the Setup Utility program” on page 55).
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:

<b>IDE controller</b>	When this feature is set to <b>Disable</b> , 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.
<b>Diskette Drive Access</b>	When this feature is set to <b>Disable</b> , the diskette drive cannot be accessed.
<b>Diskette Write Protect</b>	When this feature is set to <b>Enable</b> , all diskettes are treated as if they are write-protected.

To set Security Profile by Device, do the following:

1. Start the Setup Utility program (see “Starting the Setup Utility program” on page 55).
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, 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 the 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. If your computer is already on when you start this procedure, shut down the operating system and turn off the computer.
2. To open the Startup Device Menu, repeatedly press the F12 key as you turn on the computer.

**Note:** Selecting a startup device from this list does not permanently change the startup sequence; it is valid for one boot cycle only.

### 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 55).
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.

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## 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, the computer performance might be degraded. Therefore, you should always set HyperThreading to Disabled unless you are sure your operating system supports HyperThreading.

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## 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 45. 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 90.

**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.
- Check the hard disk drive jumper settings before you replace a hard disk drive.

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### 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.

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### Power Supply Errors

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

1. Turn off the computer and disconnect all external devices.
2. Power-on the computer.
3. There are three LEDs to help you determine if the power supply and system board are working correctly. The power button LED is located on the front of the computer and the two diagnostic LEDs are located on the power supply at the rear of the computer. After pressing the power button, observe the LEDs and refer to the following table:

Power LED	Green diagnostic LED	Yellow diagnostic LED	Action
ON	ON	OFF	This is the normal condition of the LEDs when the power is OK.
OFF	OFF	OFF	<ul style="list-style-type: none"> <li>• Make sure the power cord is attached to a working electrical outlet.</li> <li>• Check the power cord for continuity.</li> <li>• If the problem persists, replace the power supply.</li> </ul>
OFF (after the power button has been pressed)	ON	OFF	Replace the system board
ON	ON	ON	Replace the power supply

If the Diagnostic LEDs are in the normal condition and the problem persists, replace the system board and the microprocessor, one at a time, until the computer works correctly.

## Diagnostic error codes

Refer to the following diagnostic error codes when using the diagnostic tests. See “Running diagnostics tests” on page 50 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. See “Flash update procedures” on page 214</b></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. See “Flash update procedures” on page 214</b></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. See “Flash update procedures” on page 214</b></li> <li>2. Boot block</li> <li>3. System board</li> </ol>
<b>000-026-XXX</b> FLASH data error	<ol style="list-style-type: none"> <li>1. <b>Flash the system. See “Flash update procedures” on page 214</b></li> <li>2. Boot block</li> <li>3. 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 214</li> <li>3. Boot block</li> <li>4. 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 214</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. See “Flash update procedures” on page 214</b></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. See “Flash update procedures” on page 214</b></li> <li>2. Boot block</li> <li>3. System board</li> </ol>
<b>000-038-XXX</b> BIOS Extension failure	<ol style="list-style-type: none"> <li>1. <b>Flash the system. See “Flash update procedures” on page 214</b></li> <li>2. Adapter card</li> <li>3. System board</li> </ol>

Diagnostic Error Code	FRU/Action
<b>000-039-XXX</b> BIOS DMI data error	<ol style="list-style-type: none"> <li>1. <b>Flash the system. See “Flash update procedures” on page 214</b></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
<b>000-196-XXX</b> BIOS 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>000-197-XXX</b> BIOS 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 55</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>000-198-XXX</b> BIOS test aborted	<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 55</b></li> <li>2. Flash the system and retest. See “Flash update procedures” on page 214</li> <li>3. Go to “Undetermined problems” on page 90</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 90</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. <b>Flash the system. See “Flash update procedures” on page 214</b></li> <li>2. System board</li> </ol>
<b>000-270-XXX</b> BIOS ACPI failure	<ol style="list-style-type: none"> <li>1. <b>Flash the system. See “Flash update procedures” on page 214</b></li> <li>2. System board</li> </ol>
<b>001-000-XXX</b> System Test Passed	<b>No action</b>
<b>001-00X-XXX</b> System Error	<b>System board</b>
<b>001-01X-XXX</b> System Error	<b>System board</b>
<b>001-024-XXX</b> System Addressing test failure	<b>System board</b>
<b>001-025-XXX</b> System Checksum Value error	<ol style="list-style-type: none"> <li>1. <b>Flash the system. See “Flash update procedures” on page 214</b></li> <li>2. System board</li> </ol>
<b>001-026-XXX</b> System FLASH data error	<ol style="list-style-type: none"> <li>1. <b>Flash the system. See “Flash update procedures” on page 214</b></li> <li>2. System board</li> </ol>



Diagnostic Error Code	FRU/Action
<b>001-027-XXX</b> System 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 214</li> <li>3. System board</li> </ol>
<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 214</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 214</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 55</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 55</b></li> <li>2. Flash the system and retest. See "Flash update procedures" on page 214</li> <li>3. Go to "Undetermined problems" on page 90</li> </ol>

<b>Diagnostic Error Code</b>	<b>FRU/Action</b>
<b>001-199-XXX</b> System test failed, cause unknown	<ol style="list-style-type: none"> <li>1. Go to “Undetermined problems” on page 90</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>001-254-XXX</b> <b>001-255-XXX</b> <b>001-256-XXX</b> <b>001-257-XXX</b> System DMA error	<b>System board</b>
<b>001-260-XXX</b> <b>001-264-XXX</b> System IRQ error	<b>System board</b>
<b>001-268-XXX</b> System IRQ1 failure	<ol style="list-style-type: none"> <li>1. <b>Device on IRQ1</b></li> <li>2. System board</li> </ol>
<b>001-269-XXX</b> System IRQ2 failure	<ol style="list-style-type: none"> <li>1. <b>Device on IRQ2</b></li> <li>2. System board</li> </ol>
<b>001-270-XXX</b> System IRQ3 failure	<ol style="list-style-type: none"> <li>1. <b>Device on IRQ3</b></li> <li>2. System board</li> </ol>
<b>001-271-XXX</b> System IRQ4 failure	<ol style="list-style-type: none"> <li>1. <b>Device on IRQ4</b></li> <li>2. System board</li> </ol>
<b>001-272-XXX</b> System IRQ5 failure	<ol style="list-style-type: none"> <li>1. <b>Device on IRQ5</b></li> <li>2. System board</li> </ol>
<b>001-273-XXX</b> System IRQ6 (diskette drive) failure	<ol style="list-style-type: none"> <li>1. <b>Diskette Cable</b></li> <li>2. Diskette drive</li> <li>3. System board</li> </ol>
<b>001-274-XXX</b> System IRQ7 failure	<ol style="list-style-type: none"> <li>1. <b>Device on IRQ7</b></li> <li>2. System board</li> </ol>
<b>001-275-XXX</b> System IRQ8 failure	<ol style="list-style-type: none"> <li>1. <b>Device on IRQ8</b></li> <li>2. System board</li> </ol>
<b>001-276-XXX</b> System IRQ9 failure	<ol style="list-style-type: none"> <li>1. <b>Device on IRQ9</b></li> <li>2. System board</li> </ol>
<b>001-277-XXX</b> System IRQ10 failure	<ol style="list-style-type: none"> <li>1. <b>Device on IRQ10</b></li> <li>2. System board</li> </ol>
<b>001-278-XXX</b> System IRQ11 failure	<ol style="list-style-type: none"> <li>1. <b>Device on IRQ11</b></li> <li>2. System board</li> </ol>
<b>001-279-XXX</b> System IRQ12 failure	<ol style="list-style-type: none"> <li>1. <b>Device on IRQ12</b></li> <li>2. System board</li> </ol>
<b>001-280-XXX</b> System IRQ13 failure	<ol style="list-style-type: none"> <li>1. <b>Device on IRQ13</b></li> <li>2. System board</li> </ol>

<b>Diagnostic Error Code</b>	<b>FRU/Action</b>
<b>001-281-XXX</b> System IRQ14 (hard disk drive) failure	<ol style="list-style-type: none"> <li>1. <b>Hard disk drive cable</b></li> <li>2. Hard disk drive</li> <li>3. System board</li> </ol>
<b>001-282-XXX</b> System IRQ15 failure	<ol style="list-style-type: none"> <li>1. <b>Device on IRQ15</b></li> <li>2. System board</li> </ol>
<b>001-286-XXX</b> <b>001-287-XXX</b> <b>001-288-XXX</b> System Timer failure	<b>System board</b>
<b>001-292-XXX</b> System CMOS RAM error	<ol style="list-style-type: none"> <li>1. <b>Run Setup and re-test</b></li> <li>2. System board</li> </ol>
<b>001-293-XXX</b> System CMOS Battery	<ol style="list-style-type: none"> <li>1. <b>Battery</b></li> <li>2. System board</li> </ol>
<b>001-298-XXX</b> System RTC date/time update failure	<ol style="list-style-type: none"> <li>1. <b>Flash the system. See “Flash update procedures” on page 214</b></li> <li>2. System board</li> </ol>
<b>001-299-XXX</b> System RTC periodic interrupt failure	<b>System board</b>
<b>001-300-XXX</b> System RTC Alarm failure	<b>System board</b>
<b>001-301-XXX</b> System RTC Century byte error	<ol style="list-style-type: none"> <li>1. <b>Flash the system. See “Flash update procedures” on page 214</b></li> <li>2. System board</li> </ol>
<b>005-000-XXX</b> Video Test Passed	<b>No action</b>
<b>005-00X-XXX</b> Video error	<ol style="list-style-type: none"> <li>1. <b>Video card, if installed</b></li> <li>2. System board</li> </ol>
<b>005-010-XXX</b> <b>005-011-XXX</b> <b>005-012-XXX</b> <b>005-013-XXX</b> Video Signal failure	<ol style="list-style-type: none"> <li>1. <b>Video card, if installed</b></li> <li>2. System board</li> </ol>
<b>005-016-XXX</b> Video Simple Pattern test failure	<ol style="list-style-type: none"> <li>1. <b>Video Ram</b></li> <li>2. Video card, if installed</li> <li>3. System board</li> </ol>
<b>005-024-XXX</b> Video Addressing test failure	<ol style="list-style-type: none"> <li>1. <b>Video card, if installed</b></li> <li>2. System board</li> </ol>
<b>005-025-XXX</b> Video Checksum Value error	<ol style="list-style-type: none"> <li>1. <b>Video card, if installed</b></li> <li>2. System board</li> </ol>
<b>005-027-XXX</b> Video Configuration/Setup error	<ol style="list-style-type: none"> <li>1. <b>Run Setup</b></li> <li>2. Video drivers update</li> <li>3. Video card, if installed</li> <li>4. System board</li> </ol>

Diagnostic Error Code	FRU/Action
<b>005-031-XXX</b> Video Device Cable failure	<ol style="list-style-type: none"> <li>1. <b>Video cable</b></li> <li>2. Monitor</li> <li>3. Video card, if installed</li> <li>4. System board</li> </ol>
<b>005-032-XXX</b> Video Device Controller failure	<ol style="list-style-type: none"> <li>1. <b>Video card, if installed</b></li> <li>2. System board</li> </ol>
<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 55</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 55</b></li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 214</li> <li>3. Go to "Undetermined problems" on page 90</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 90</li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 214</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>

Diagnostic Error Code	FRU/Action
<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>
<b>006-197-XXX</b> 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>
<b>006-198-XXX</b> 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 214</li> <li>3. Go to "Undetermined problems" on page 90</li> </ol>
<b>006-199-XXX</b> Diskette interface test failed, cause unknown	<ol style="list-style-type: none"> <li>1. Go to "Undetermined problems" on page 90</li> <li>2. Flash the system and re-test</li> <li>3. Replace component under function test</li> </ol>
<b>006-25X-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>011-000-XXX</b> Serial port Interface Test Passed	<b>No action</b>
<b>011-001-XXX</b> 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>
<b>011-002-XXX</b> <b>011-003-XXX</b> Serial port Timeout/Parity error	<b>System board</b>
<b>011-013-XXX</b> <b>011-014-XXX</b> Serial port Control Signal/Loopback test failure	<b>System board</b>
<b>011-015-XXX</b> Serial port External Loopback failure	<ol style="list-style-type: none"> <li>1. <b>Wrap plug</b></li> <li>2. System board</li> </ol>
<b>011-027-XXX</b> 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 214</li> <li>3. System board</li> </ol>
<b>011-03X-XXX</b> <b>011-04X-XXX</b> Serial port failure	<b>System board</b>

Diagnostic Error Code	FRU/Action
<b>011-195-XXX</b> Serial port Test aborted by user	<b>Information only</b> Re-start the test, if necessary
<b>011-196-XXX</b> 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>
<b>011-197-XXX</b> 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 55</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>011-198-XXX</b> 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 55</b></li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 214</li> <li>3. Go to "Undetermined problems" on page 90</li> </ol>
<b>011-199-XXX</b> Serial port test failed, cause unknown	<ol style="list-style-type: none"> <li>1. Go to "Undetermined problems" on page 90</li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 214</li> <li>3. Replace component under function test</li> </ol>
<b>011-2XX-XXX</b> Serial port signal failure	<ol style="list-style-type: none"> <li>1. <b>External serial device</b></li> <li>2. System board</li> </ol>
<b>014-000-XXX</b> Parallel port Interface Test Passed	<b>No action</b>
<b>014-001-XXX</b> 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>
<b>014-002-XXX</b> <b>014-003-XXX</b> Parallel port Timeout/Parity error	<b>System board</b>
<b>014-013-XXX</b> <b>014-014-XXX</b> Parallel port Control Signal/Loopback test failure	<b>System board</b>
<b>014-015-XXX</b> Parallel port External Loopback failure	<ol style="list-style-type: none"> <li>1. <b>Wrap plug</b></li> <li>2. System board</li> </ol>
<b>014-027-XXX</b> 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 214</li> <li>3. System board</li> </ol>

Diagnostic Error Code	FRU/Action
014-03X-XXX 014-04X-XXX Parallel port failure	System board
014-195-XXX Parallel port Test aborted by user	Information only Re-start the test, if necessary
014-196-XXX 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>
014-197-XXX 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 55</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>
014-198-XXX 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 214</li> <li>3. Go to "Undetermined problems" on page 90</li> </ol>
014-199-XXX Parallel port test failed, cause unknown	<ol style="list-style-type: none"> <li>1. Go to "Undetermined problems" on page 90</li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 214</li> <li>3. Replace component under function test</li> </ol>
014-2XX-XXX 014-3XX-XXX Parallel port failure	<ol style="list-style-type: none"> <li>1. External parallel device</li> <li>2. System board</li> </ol>
015-000-XXX USB port Interface Test Passed	No action
015-001-XXX 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>
015-002-XXX 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>
015-015-XXX 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>
015-027-XXX USB port Configuration/Setup error	<ol style="list-style-type: none"> <li>1. Flash the system. See "Flash update procedures" on page 214</li> <li>2. System board</li> </ol>
015-032-XXX USB port Device Controller failure	System board

Diagnostic Error Code	FRU/Action
<b>015-034-XXX</b> USB port buffer allocation failure	<ol style="list-style-type: none"> <li>1. <b>Reboot the system</b></li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 214</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. <b>Remove USB device(s) and re-test</b></li> <li>2. System board</li> </ol>
<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 214</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 55</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 55</b></li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 214</li> <li>3. Go to "Undetermined problems" on page 90</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 90</li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 214</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>



Diagnostic Error Code	FRU/Action
<b>018-196-XXX</b> PCI Card 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>018-197-XXX</b> PCI Card 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 55</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>018-198-XXX</b> PCI Card test aborted	<ol style="list-style-type: none"> <li>1. If a component is called out, make sure it is connected and/or enabled. See Chapter 6, "Using the Setup Utility," on page 55</li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 214</li> <li>3. Go to "Undetermined problems" on page 90</li> </ol>
<b>018-199-XXX</b> PCI Card test failed, cause unknown	<ol style="list-style-type: none"> <li>1. Go to "Undetermined problems" on page 90</li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 214</li> <li>3. Replace component under function test</li> </ol>
<b>018-250-XXX</b> PCI Card Services 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>
<b>020-000-XXX</b> PCI Interface Test Passed	<b>No action</b>
<b>020-0XX-XXX</b> PCI Interface 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>
<b>020-195-XXX</b> PCI Test aborted by user	<b>Information only</b> Re-start the test, if necessary
<b>020-196-XXX</b> PCI 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>020-197-XXX</b> PCI 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 55</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 55</b></li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 214</li> <li>3. Go to "Undetermined problems" on page 90</li> </ol>
020-199-XXX PCI test failed, cause unknown	<ol style="list-style-type: none"> <li>1. Go to "Undetermined problems" on page 90</li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 214</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 214</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 55</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
<b>025-198-XXX</b> 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 55</b></li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 214</li> <li>3. Go to "Undetermined problems" on page 90</li> </ol>
<b>025-199-XXX</b> IDE interface test failed, cause unknown	<ol style="list-style-type: none"> <li>1. Go to "Undetermined problems" on page 90</li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 214</li> <li>3. Replace component under function test</li> </ol>
<b>030-000-XXX</b> SCSI interface Test Passed	<b>No action</b>
<b>030-00X-XXX</b> <b>030-01X-XXX</b> 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>
<b>030-027-XXX</b> 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 214</li> <li>3. SCSI device</li> <li>4. SCSI adapter card, if installed</li> <li>5. System board</li> </ol>
<b>030-03X-XXX</b> <b>030-04X-XXX</b> 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>
<b>030-195-XXX</b> SCSI interface Test aborted by user	<b>Information only</b> Re-start the test, if necessary
<b>030-196-XXX</b> 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>
<b>030-197-XXX</b> 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 55</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 55</b></li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 214</li> <li>3. Go to "Undetermined problems" on page 90</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 90</li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 214</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 55</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 55</b></li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 214</li> <li>3. Go to "Undetermined problems" on page 90</li> </ol>
035-199-XXX RAID interface test failed, cause unknown	<ol style="list-style-type: none"> <li>1. See "Undetermined problems" on page 90</li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 214</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 214</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 55</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 55</b></li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 214</li> <li>3. Go to "Undetermined problems" on page 90</li> </ol>
071-199-XXX Audio port test failed, cause unknown	<ol style="list-style-type: none"> <li>1. See "Undetermined problems" on page 90</li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 214</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 55</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 55</b></li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 214</li> <li>3. Go to "Undetermined problems" on page 90</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 90</li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 214</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 55</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 55</b></li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 214</li> <li>3. Go to "Undetermined problems" on page 90</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 90</li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 214</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 55</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 214</b></li> <li>2. Go to "Undetermined problems" on page 90</li> </ol>
089-199-XXX Microprocessor test failed, cause unknown	<ol style="list-style-type: none"> <li>1. See "Undetermined problems" on page 90</li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 214</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 55</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 55</b></li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 214</li> <li>3. Go to "Undetermined problems" on page 90</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 90</b></li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 214</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 55</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 214</li> <li>3. Go to "Undetermined problems" on page 90</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 90</b></li> <li>2. Flash the system and re-test. See "Flash update procedures" on page 214</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	<b>Remove the Modem and re-test the system</b>

## Beep symptoms

Beep symptoms are short tones or a series of short tones separated by pauses (intervals without sound). See the following examples.

Beeps	Description
1-2-X	<ul style="list-style-type: none"> <li>• One beep</li> <li>• A pause (or break)</li> <li>• Two beeps</li> <li>• A pause (or break)</li> <li>• Any number of breaks</li> </ul>
4	Four continuous beeps

Use the following table to diagnose beep symptoms.

Beep Symptom	FRU/Action
1-1-3 CMOS read-write error	<ol style="list-style-type: none"> <li>1. Run Setup</li> <li>2. System Board</li> </ol>
1-2-2-3 ROM BIOS check error	System board
1-2-1 Programmable Interval Timer failed	System board
1-2-2 DMA Initialization failed	System board
1-2-3 DMA page register write/read failed	System board
1-2-4 RAM refresh verification failed	<ol style="list-style-type: none"> <li>1. Memory module</li> <li>2. System Board</li> </ol>
1-3-3-1 1st 64K RAM test failed	<ol style="list-style-type: none"> <li>1. Memory module</li> <li>2. System Board</li> </ol>
1-3-2 1st 64K RAM parity test failed	<ol style="list-style-type: none"> <li>1. Memory module</li> <li>2. Processor</li> <li>3. System Board</li> </ol>
2-2-3-1 Interrupt vector loading test failed	System board
2-1-1 Secondary DMA register failed	System board
2-1-2 Primary DMA register failed	System board
2-1-3 Primary interrupt mask register failed	System board
2-1-4 Secondary interrupt mask register failed	System board
2-2-1 Interrupt vector loading failed	System board
1-3-1-3 Keyboard controller failed	<ol style="list-style-type: none"> <li>1. System Board</li> <li>2. Keyboard</li> </ol>
2-2-3 CMOS power failure and checksum checks failed	<ol style="list-style-type: none"> <li>1. Battery</li> <li>2. System Board</li> </ol>

<b>Beep Symptom</b>	<b>FRU/Action</b>
2-2-4 CMOS configuration info validation failed	1. <b>Battery</b> 2. System Board
2-3-1 Screen initialization failed	1. <b>Jumper on J28</b> 2. System Board
2-3-2 Screen memory failed	<b>System board</b>
2-3-3 Screen retrace failed	<b>System board</b>
1-2 Search for video ROM failed	<b>System board</b>
All other beep code sequences	<b>System board</b>
Continuous beep	<b>System Board</b>
Repeating short beeps	1. <b>Keyboard stuck key</b> 2. Keyboard Cable 3. System Board

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## No-beep symptoms

Symptom/Error	FRU/Action
No beep during POST but computer works correctly.	<b>System board</b>
No beep during POST.	<ol style="list-style-type: none"><li>1. See “Undetermined problems” on page 90.</li><li>2. System Board</li><li>3. Memory Module</li><li>4. Any Adapter or Device</li><li>5. Riser Card</li><li>6. Power Cord</li><li>7. Power Supply</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 diskette drive is working
- Verifies that the hard disk drive is working

If the POST finishes without detecting any problems, a single beep sounds and the first screen of the operating system or application program appears.

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.

In the following index, X can represent any number.

POST Error Code	FRU/Action
<b>162</b> Configuration error	Select the default settings in BIOS. See Chapter 6, "Using the Setup Utility," on page 55.
<b>164</b> Memory Size Error	<ol style="list-style-type: none"><li>1. Run the Extended Memory Diagnostic tests</li><li>2. Replace memory modules</li></ol>
<b>166</b> Boot Block Check Sum Error	<ol style="list-style-type: none"><li>1. Perform a flash update to update the BIOS level</li><li>2. System board</li></ol>
<b>167</b> No Processor BIOS update found	<ol style="list-style-type: none"><li>1. Run Setup. Check Stepping level for the BIOS level needed, then perform the flash update.</li><li>2. Replace the microprocessor</li></ol>
<b>175</b> Primary Copy of Secure Data is damaged	<ol style="list-style-type: none"><li>1. Run Setup and select default settings</li><li>2. System board</li></ol>
<b>176</b> The System has been tampered with	<ol style="list-style-type: none"><li>1. Covers were removed from the computer</li></ol>
<b>179</b> Boot Integrity Services Segment Error	<ol style="list-style-type: none"><li>1. Perform a flash update to update the BIOS level</li><li>2. System board</li></ol>
<b>184</b> Asset Control Antenna not detected	<ol style="list-style-type: none"><li>1. Make sure Asset Care and Asset ID™ are enabled in Configuration/Setup</li><li>2. RFID Antenna</li><li>3. Replace system board</li></ol>
<b>186</b> Security Hardware Control Logic Error	If problem persists, replace the system board
<b>190</b> System Security: Invalid Remote Change Requested	If problem persists, replace the system board

<b>POST Error Code</b>	<b>FRU/Action</b>
<b>191</b> System Security: Embedded Security hardware Reset	If problem persists, replace the system board
<b>192</b> System Security: Embedded Security hardware tamper detected	If problem persists, replace the system board
<b>193</b> System Security: Embedded Security hardware Removed	If problem persists, replace the system board
<b>194</b> System Security: Asset ID Antenna has been Removed	If problem persists, replace the system board
<b>195</b> System Security: Asset ID Antenna has been installed	If problem persists, replace the system board
<b>196</b> System Tampered Cleared	If problem persists, replace the system board
<b>201</b> Memory error	<ol style="list-style-type: none"> <li>1. Run Enhanced Diagnostics Memory Test</li> <li>2. Memory module</li> <li>3. System board</li> </ol>
<b>210</b> Keyboard stuck key error	<ol style="list-style-type: none"> <li>1. Check for stuck keys</li> <li>2. Replace the keyboard</li> </ol>
<b>211</b> Keyboard error	<ol style="list-style-type: none"> <li>1. Make sure keyboard is connected correctly</li> <li>2. Check for stuck keys</li> <li>3. Replace the keyboard</li> </ol>
<b>212</b> Keyboard controller error	<ol style="list-style-type: none"> <li>1. Replace the keyboard</li> <li>2. If problem persists, replace the system board</li> </ol>
<b>250</b> Battery is dead	<ol style="list-style-type: none"> <li>1. Replace the battery and run Setup</li> <li>2. If problem persists, replace the system board</li> </ol>
<b>270</b> Real time clock error	<ol style="list-style-type: none"> <li>1. Run Setup and set date and time</li> <li>2. If problem persists, replace the system board</li> </ol>
<b>271</b> Date and time out of range	<ol style="list-style-type: none"> <li>1. Run Setup and set date and time</li> <li>2. If problem persists, replace the system board</li> </ol>
<b>662</b> Configuration Change has occurred	Diskette drive configuration error or wrong diskette drive type; run Setup.
<b>1762</b> Configuration Change has occurred	<ol style="list-style-type: none"> <li>1. Run Setup and verify hard disk drive settings.</li> <li>2. Run hard disk drive diagnostics.</li> <li>3. Replace hard disk drive</li> </ol>
<b>1800</b> PCI/PnP Error! No Hardware Interrupt Available	<ol style="list-style-type: none"> <li>1. Run Setup and verify PCI/ISA configuration settings.</li> <li>2. Run diagnostics.</li> <li>3. Replace PCI Adapter</li> </ol>



<b>POST Error Code</b>	<b>FRU/Action</b>
<b>1801</b> PCI/PnP Error! No Space Available to Shadow ROM	<ol style="list-style-type: none"> <li>1. Run Setup and verify PCI/ISA configuration settings.</li> <li>2. Run diagnostics.</li> <li>3. Replace PCI Adapter</li> </ol>
<b>1802</b> PCI/PnP Error! Not Enough I/O Space Available	<ol style="list-style-type: none"> <li>1. Run Setup and verify PCI/ISA configuration settings.</li> <li>2. Run diagnostics.</li> <li>3. Replace PCI Adapter</li> </ol>
<b>1803</b> PCI/PnP Error! Not Enough Memory Space Available	<ol style="list-style-type: none"> <li>1. Run Setup and verify PCI/ISA configuration settings.</li> <li>2. Run diagnostics.</li> <li>3. Replace PCI Adapter</li> </ol>
<b>1804</b> PCI/PnP Error! Not Enough Real Memory Space Available	<ol style="list-style-type: none"> <li>1. Run Setup and verify PCI/ISA configuration settings.</li> <li>2. Run diagnostics.</li> <li>3. Replace PCI Adapter</li> </ol>
<b>1805</b> PCI/PnP Error! Adapter ROM Checksum Error	<ol style="list-style-type: none"> <li>1. Run Setup and verify PCI/ISA configuration settings.</li> <li>2. Run diagnostics.</li> <li>3. Replace PCI Adapter</li> </ol>
<b>1962</b> No operating system found	Press F1 to repeat boot sequence.
<b>5962</b> An IDE device (other than hard drive) configuration error	<ol style="list-style-type: none"> <li>1. Run Setup.</li> <li>2. CD-ROM Drive</li> <li>3. CD-ROM Adapter</li> <li>4. Zip or other ATAPI device</li> <li>5. Replace system Board</li> <li>6. Replace riser card if applicable</li> </ol>
<b>8603, 8604</b> Pointing Device Error	<ol style="list-style-type: none"> <li>1. Replace pointing device (mouse)</li> <li>2. if problem persists, replace the system board</li> </ol>

## Miscellaneous error messages

Message/Symptom	FRU/Action
CMOS Backup Battery inaccurate	<ol style="list-style-type: none"> <li>1. <b>CMOS Backup Battery</b> (see Chapter 2, "Safety information," on page 5)</li> <li>2. System Board</li> </ol>
Changing colors	<b>Display/Monitor</b>
Computer will <i>not</i> power-off. See "Power Supply Errors" on page 59.	<ol style="list-style-type: none"> <li>1. <b>Power Switch</b></li> <li>2. System Board</li> <li>3. Riser card</li> </ol>
Computer will <i>not</i> RPL from server	<ol style="list-style-type: none"> <li>1. <b>Ensure that network is in startup sequence as first device or first device after diskette</b></li> <li>2. Ensure that network adapter is enabled for RPL</li> <li>3. 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>1. <b>Check power supply and signal cable connections to network adapter</b></li> <li>2. Ensure that the operating system settings are set to enable Wake on LAN<sup>®</sup></li> <li>3. Ensure Wake On LAN feature is enabled in Setup/Configuration (see "Starting the Setup Utility program" on page 55)</li> <li>4. Ensure network administrator is using correct MAC address</li> <li>5. Ensure no interrupt or I/O address conflicts</li> <li>6. Network adapter (advise network administrator of new MAC address)</li> </ol>
Dead computer. See "Power Supply Errors" on page 59.	<ol style="list-style-type: none"> <li>1. <b>Power Supply</b></li> <li>2. System Board</li> <li>3. Riser card</li> </ol>
Diskette drive in-use light remains on or does not light when drive is active.	<ol style="list-style-type: none"> <li>1. <b>Diskette Drive</b></li> <li>2. System Board</li> <li>3. Diskette Drive Cable</li> <li>4. Riser card</li> </ol>
Flashing cursor with an otherwise blank display.	<ol style="list-style-type: none"> <li>1. <b>System Board</b></li> <li>2. Primary Hard Disk Drive</li> <li>3. Hard Disk Drive Cable</li> <li>4. Riser card</li> </ol>
Incorrect memory size during POST	<ol style="list-style-type: none"> <li>1. <b>Run the Memory tests</b></li> <li>2. Memory Module</li> <li>3. System Board</li> </ol>

Message/Symptom	FRU/Action
"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>1. <b>System Board</b></li> <li>2. Diskette Drive Cable</li> <li>3. Riser card</li> <li>4. Network Adapter</li> </ol>
Intensity or color varies from left to right of characters and color bars	<ol style="list-style-type: none"> <li>1. <b>Display</b></li> <li>2. System Board</li> </ol>
No power or fan not running	1. <b>See "Power Supply Errors" on page 59.</b>
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> <li>4. Riser card</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. <b>Power Supply</b></li> <li>2. System Board</li> <li>3. LED Cables</li> </ol>
Printer problems	1. <b>Printer</b>
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></li> <li>2. Diskette Drive</li> <li>3. Diskette Drive Cable</li> <li>4. System Board</li> <li>5. Riser card</li> <li>6. 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>

Message/Symptom	FRU/Action
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

Check the power supply voltages (see “Power Supply Errors” on page 59). If the voltages are correct, return here and continue with the following steps.

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. Riser card
  - d. Memory modules
  - e. Extended video memory
  - f. External Cache
  - g. External Cache RAM
  - h. Hard disk drive
  - i. 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 (Types 8126, 8174, 8175, and 8176)

### Important

Before you replace any FRU, read Chapter 2, "Safety information," on page 5. These precautions and guidelines will help you work safely.

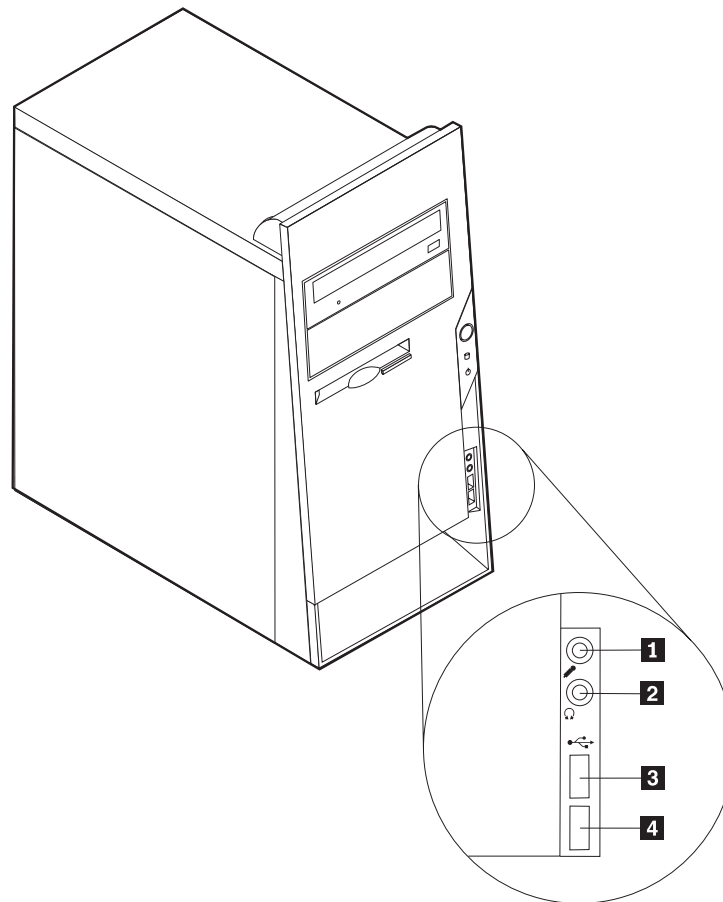
FRU replacements are to be done by trained service technicians only.

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

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### Locating connectors on the front

The following illustration shows the locations of the USB connectors on the front of the computer.

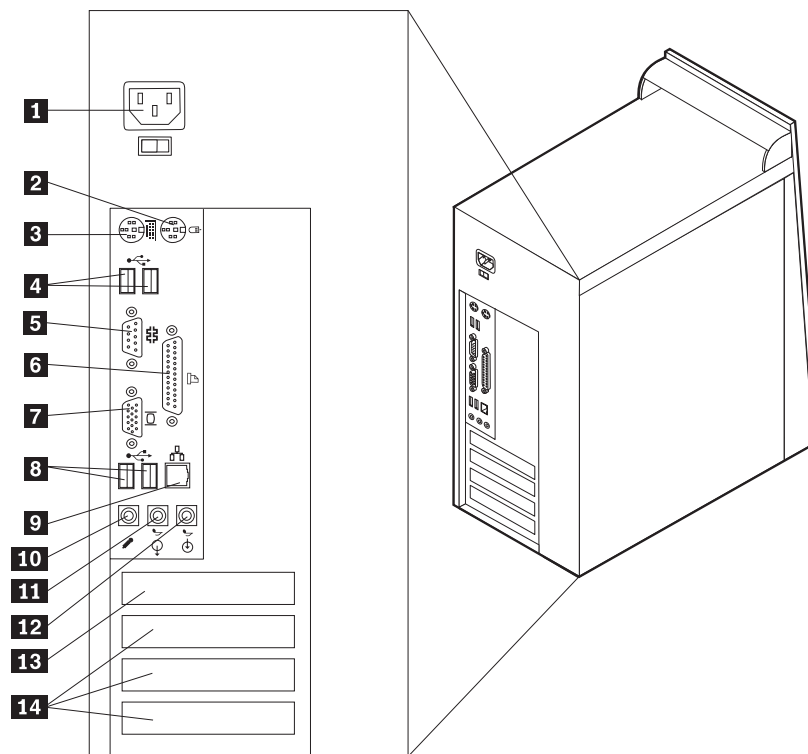


- 1** Microphone connector
- 2** Headphone connector
- 3** USB connector
- 4** USB connector

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## Locating the connectors on the rear

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



<b>1</b>	Power connector	<b>8</b>	USB connectors
<b>2</b>	Mouse connector	<b>9</b>	Ethernet connector
<b>3</b>	Keyboard connector	<b>10</b>	Microphone connector
<b>4</b>	USB connectors	<b>11</b>	Audio line out connector
<b>5</b>	Serial connector	<b>12</b>	Audio line in connector
<b>6</b>	Parallel connector	<b>13</b>	AGP slot (some models)
<b>7</b>	VGA Monitor connector	<b>14</b>	PCI slots (In some models, other devices, such as a modem, might be installed here.)

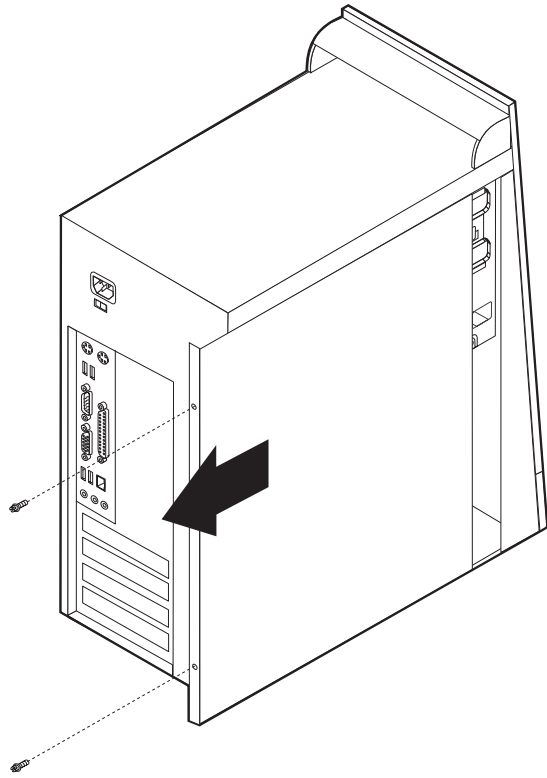
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## Removing the cover

### Important

Read Chapter 2, "Safety information," on page 5 and "Handling electrostatic discharge-sensitive devices" on page 8 before removing the cover.

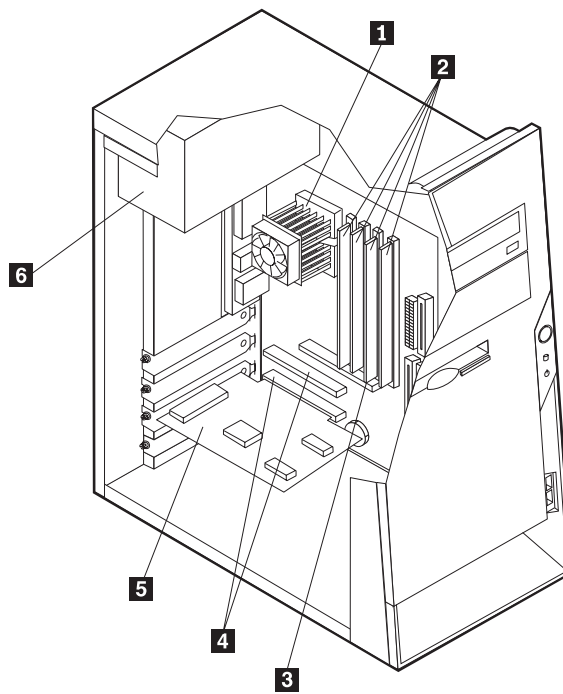
1. Shut down your operating system, remove any media (diskettes, CDs, or tapes) from the drives, and turn off all attached devices and the computer.
2. Unplug all power cords from electrical outlets.
3. Disconnect all cables attached to the computer. This includes power cords, input/output (I/O) cables, and any other cables that are connected to the computer.
4. Remove the two screws at the rear and slide the cover to the rear to remove.



---

## Locating components

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

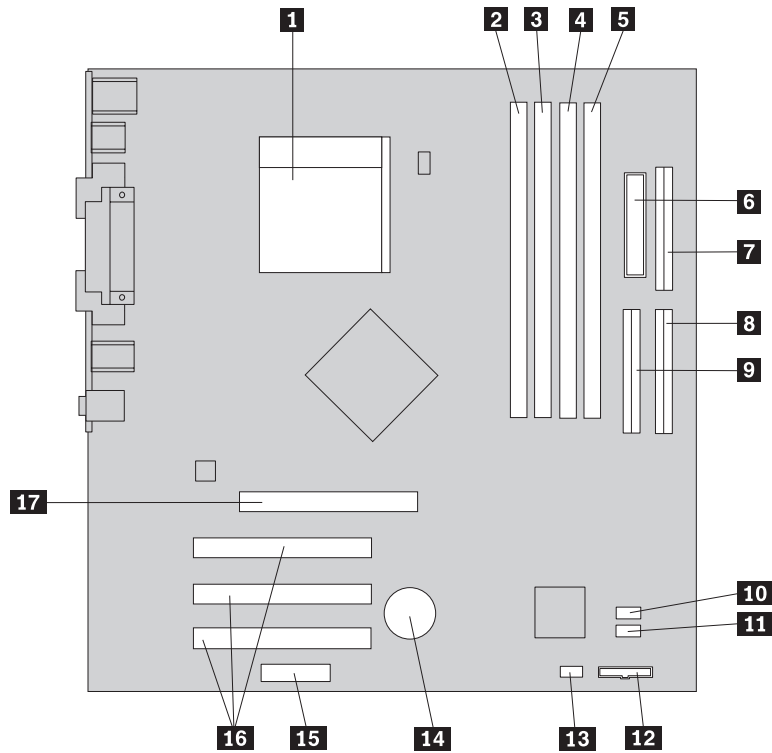


- 1** Microprocessor and heat sink
- 2** DIMMs
- 3** AGP slot (some models)

- 4** PCI slots
- 5** PCI adapter
- 6** Power supply



## Identifying parts on the system board

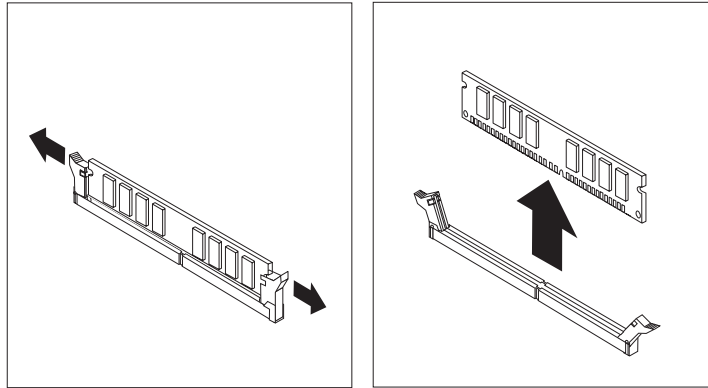


- |          |                       |           |                             |
|----------|-----------------------|-----------|-----------------------------|
| <b>1</b> | Microprocessor        | <b>9</b>  | Secondary IDE connector     |
| <b>2</b> | DIMM connector 1      | <b>10</b> | SATA1 connector             |
| <b>3</b> | DIMM connector 2      | <b>11</b> | SATA2 connector             |
| <b>4</b> | DIMM connector 3      | <b>12</b> | Power switch/LEDs connector |
| <b>5</b> | DIMM connector 4      | <b>13</b> | Clear CMOS/Recovery jumper  |
| <b>6</b> | Power connector       | <b>14</b> | Battery                     |
| <b>7</b> | Diskette drive        | <b>15</b> | Front panel audio connector |
| <b>8</b> | Primary IDE connector | <b>16</b> | PCI slots                   |
|          |                       | <b>17</b> | AGP slot (some models)      |

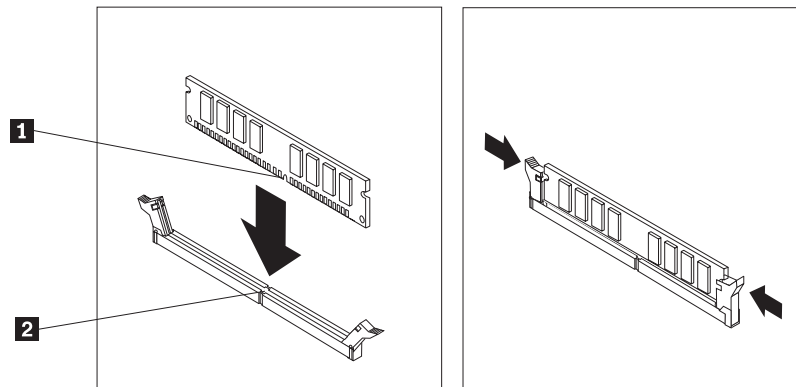
---

## Removing and replacing memory

1. Remove the cover. See “Removing the cover” on page 92.
2. To locate the DIMM connectors. See “Identifying parts on the system board” on page 95.
3. Open the retaining clips and remove the failing DIMM.



4. Make sure the notch **1** on the new DIMM is aligned correctly with the connector key **2** on the socket. Insert the DIMM straight down into the connector until it snaps into position and the retaining clips are closed.



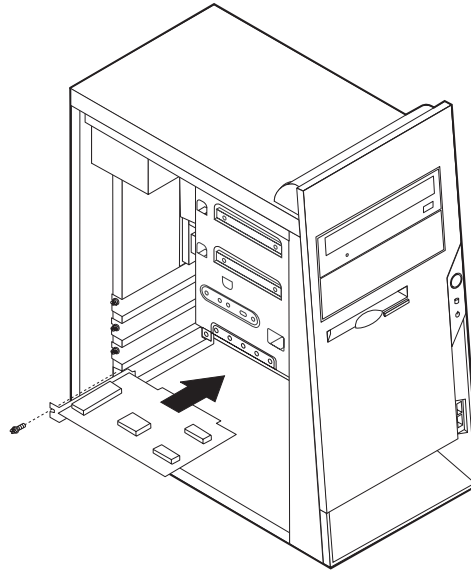
5. Go to “Closing the cover and connecting cables” on page 104.

---

## Removing and replacing a PCI adapter

1. Remove the cover. See “Removing the cover” on page 92.
2. Remove the screw securing the adapter.
3. Remove the failing adapter.
4. Remove the new adapter from its static-protective package.
5. Install the new adapter into the appropriate slot on the system board.

- Secure the adapter with the screw as shown.

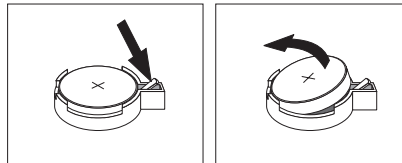


- Go to “Closing the cover and connecting cables” on page 104.

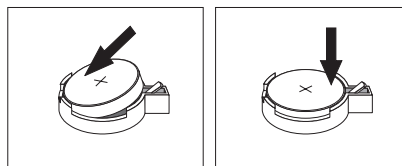
---

## Removing and replacing the battery

- Remove the cover. See “Removing the cover” on page 92.
- Locate the battery. See “Identifying parts on the system board” on page 95.
- If necessary, remove any adapters that impede access to the battery. See “Removing and replacing a PCI adapter” on page 96 for more information.
- Remove the old battery.



- Install the new battery.



- Replace any adapters that were removed to gain access to the battery.
- Go to “Closing the cover and connecting cables” on page 104.

**Note:** Use the Setup Utility program to set the date and time and any passwords. See Chapter 6, “Using the Setup Utility,” on page 55.

## Removing and replacing the power supply

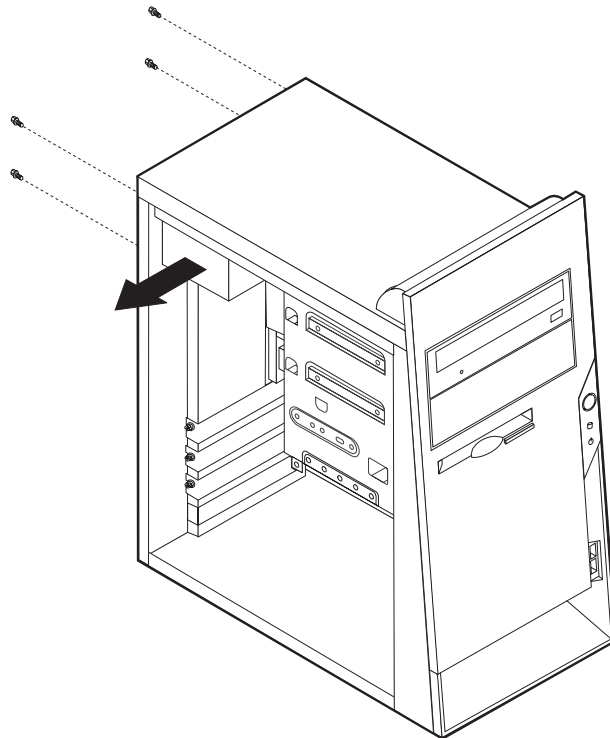
### Attention

Never remove the cover on a power supply or any part that has the following label attached.



Hazardous voltage, current, and energy levels are present inside any component that has this label attached. There are no serviceable parts inside these components.

1. Remove the cover. See “Removing the cover” on page 92.
2. Disconnect all power supply cables from the drives.
3. Disconnect all power supply cables from the system board. See “Identifying parts on the system board” on page 95.
4. Support the power supply and remove the four screws that hold the power supply in place.

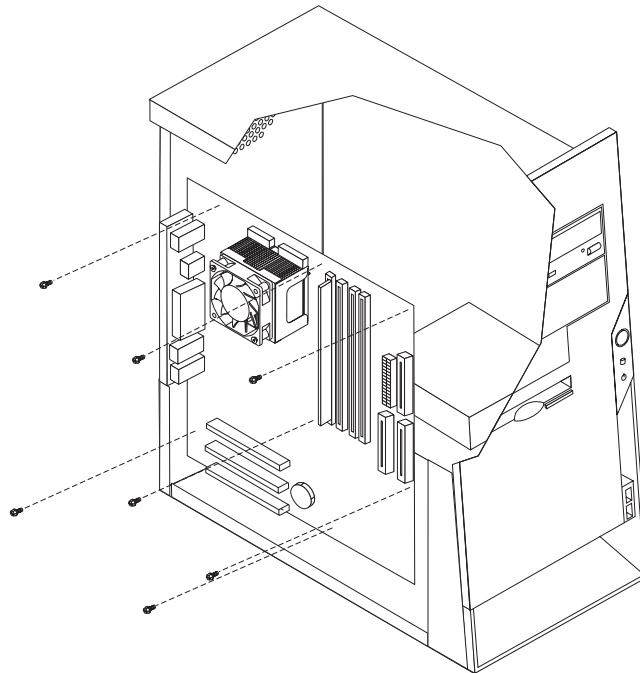


5. Remove the power supply.
6. Install the new power supply and insert the four screws that hold the power supply in place.
7. Reconnect all power supply cables to the system board and the drives. See “Identifying parts on the system board” on page 95.
8. Go to “Closing the cover and connecting cables” on page 104.

---

## Removing and replacing the system board

1. Remove the cover. See “Removing the cover” on page 92.
2. Remove any PCI adapters installed. See “Removing and replacing a PCI adapter” on page 96.
3. Remove any air baffles or ducts.
4. 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. See “Identifying parts on the system board” on page 95.
5. Disconnect all cables connected to the system board.
6. Remove the screws that secure the system board in place and remove the system board.



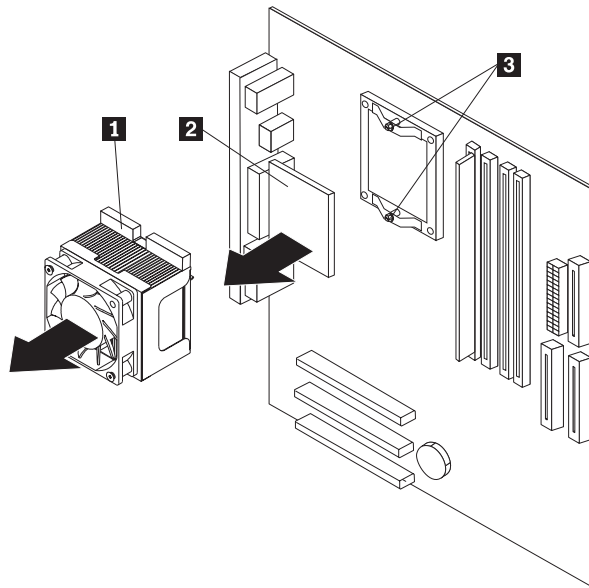
7. Take note of the location of the DIMMs and remove them from the failing system board and install them on the new system board in the same location as they were on the failing system board. See “Removing and replacing memory” on page 96.
8. Remove the heat sink and microprocessor from the failing system board and install them on the new system board. See “Removing and replacing the microprocessor.” Continue at the next step after installing the heat sink and microprocessor on the new system board.
9. Install the new system board and insert the screws.
10. Reconnect all cables to the system board.
11. Replace any air baffles or ducts.
12. Go to “Closing the cover and connecting cables” on page 104.

---

## Removing and replacing the microprocessor

1. Remove the cover. See “Removing the cover” on page 92.
2. Remove any air baffles or ducts that cover the microprocessor.
3. Disconnect the heat sink fan cable from the system board. Refer to “Identifying parts on the system board” on page 95.

4. Loosen the two captured screws **3** holding the fan and heat sink **1** in place, and pivot them to the side.



5. To remove the fan and heat sink from the microprocessor **2**, gently twist the fan and heat sink to break the seal formed by the thermal grease and remove.

**Note:** If the thermal grease seal cannot be broken, you may want to start up the system to heat the processor and loosen the thermal grease.

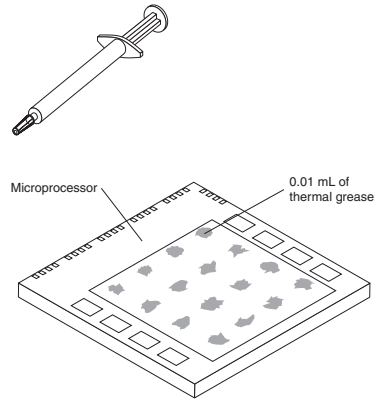
6. Place the heat sink on a clean work surface.
7. Take notice of the orientation of the beveled corner on the microprocessor. This is important when reinstalling the microprocessor on the system board.
8. Release the microprocessor from the system board by pulling outward and lifting the small handle on the microprocessor socket to its maximum vertical position. Carefully lift the microprocessor off the socket.
9. Make sure that the microprocessor socket handle is fully in the vertical position. Otherwise the microprocessor pins might be damaged when installing the microprocessor.
10. Position the microprocessor so that the pins are aligned with the socket and with the beveled corner in the correct orientation.
11. Lower the handle until it is fully in the down position and locked into the socket. This secures the microprocessor in the socket.
12. Remove the cleaning pad from its package and use the cleaning pad to wipe the thermal grease from the bottom of the heat sink.

**Notes:**

- a. The cleaning pad and thermal grease are separate FRUs and are not included with the system board or microprocessor FRUs. These must be ordered separately and shipped along with the FRUs being replaced.
- b. Be sure that all of the thermal grease is removed.

**Note:** 0.01ML is one tick mark on the syringe. If the grease is properly applied, approximately half (0.02ML) of the grease will remain in the syringe.

13. Use the thermal grease syringe to place 16 uniformly spaced dots of 0.01ML each on the top of the microprocessor.

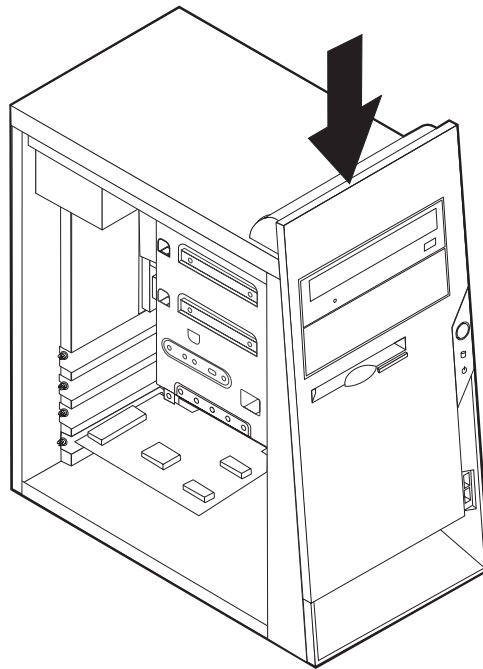


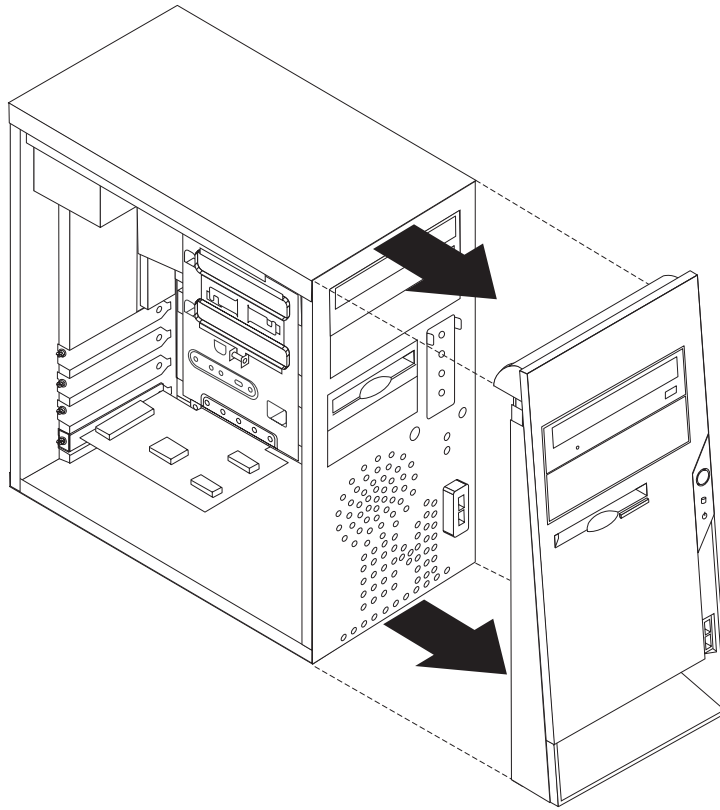
14. Place the fan and heat sink into position on the microprocessor.
15. When tightening the screws that clamp the heat sink, do not overtighten. Tighten the clamp screws evenly by tightening one side some and then the other until they are both snug.
16. Reconnect the fan to the system board connector.
17. If you are replacing a failing system board, go back to the system board procedure. Otherwise, go to "Closing the cover and connecting cables" on page 104.

---

## Removing and replacing drives

1. Remove the cover. See "Removing the cover" on page 92.
2. If you are removing the hard disk drive or diskette drive, remove the front bezel by releasing the four plastic tabs inside the chassis and pressing down on the top of the bezel.





3. Disconnect the signal and power cables from the failing drive.

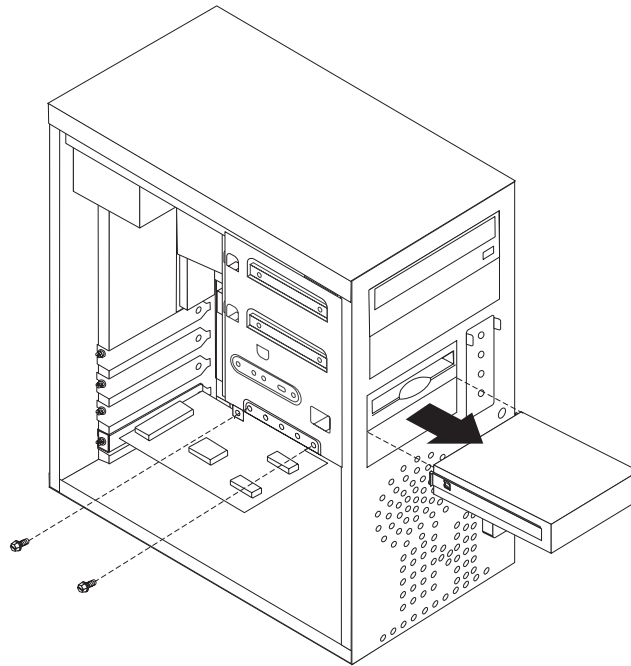
**Note:** Take note of the location of any cables you disconnect. You might have to disconnect cables to other drives to gain access to the drive you are removing.

4. Remove the screws that secure the drive being removed.

**Note:** The hard disk drive has four screws; two at the side of the drive and two on the bottom.

5. If removing the hard disk drive, remove the cover on the front of the drive.
6. Slide the drive out the front of the computer.





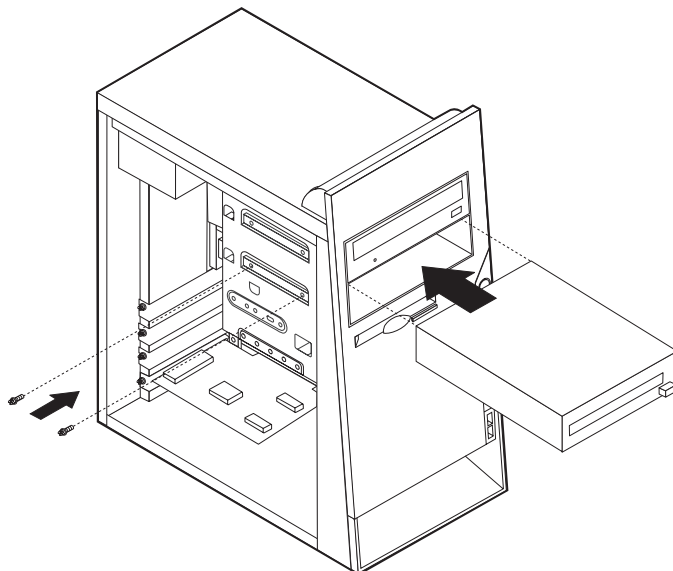
**Note:** This illustration shows the hard disk drive being removed. All drives are removed in the same manner. However, it is only necessary to remove the front bezel when removing the hard disk drive or diskette drive.

7. Make sure the drive that you are installing is set correctly as either a master or a slave device. Jumper the new drive the same as the drive being replaced.

**Note:** If you are installing a serial ATA drive, no master/slave jumpering is necessary.

Refer to the documentation that comes with your drive for master/slave jumper information.

8. Install the new drive into the bay. Align the screw holes and install the screws to secure the drive.



**Note:** This illustration shows a CD drive installation. The hard disk drive and diskette drive is installed in the same manner except that the front bezel is not in place.

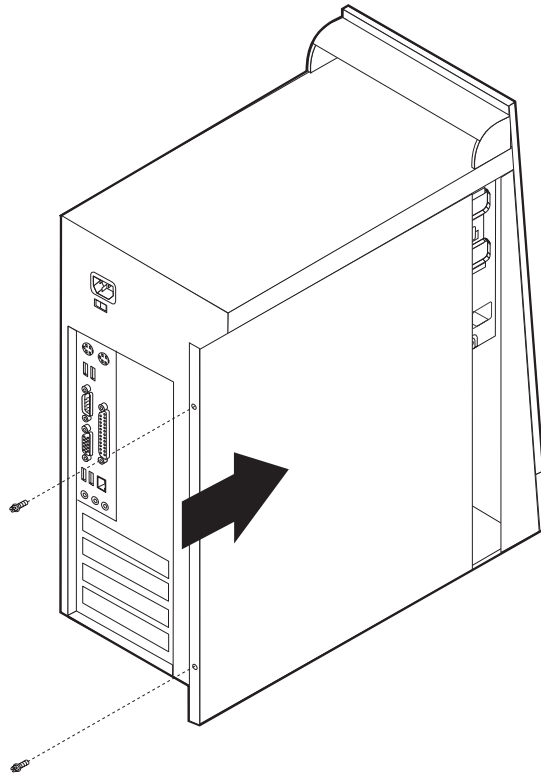
9. If installing the hard disk drive, replace the cover on the front of the drive.
10. If the front bezel was removed, replace it by aligning the four plastic tabs and pressing the bezel into position.
11. Reconnect the signal and power cables to the drive.
12. Go to "Closing the cover and connecting cables."

---

## Closing the cover and connecting cables

After replacing FRUs, you need to install any removed parts, replace the cover, and reconnect any cables, including telephone lines and power cords. Also, depending on the FRU that is replaced, you might need to confirm the updated information in the Setup Utility program.

1. Ensure that all components have been reassembled correctly and that no tools or loose screws are left inside the computer.
2. Clear any cables that might impede the replacement of the cover.
3. Position the cover on the chassis so that the guides on the top and bottom of the cover engage the chassis and push the cover to the closed position. Insert the screws that secure the cover.



4. Reconnect the external cables and power cords to the computer.
5. To update the configuration, see Chapter 6, "Using the Setup Utility," on page 55.

**Note:** When the power cord is first plugged in, the computer might appear to turn on for a few seconds and then turn off. This is a normal sequence to enable the computer to initialize.

---

## Chapter 9. Replacing FRUs (Types 8149, 8177, and 8178)

### Important

Before you replace any FRU, read Chapter 2, "Safety information," on page 5. These precautions and guidelines will help you work safely.

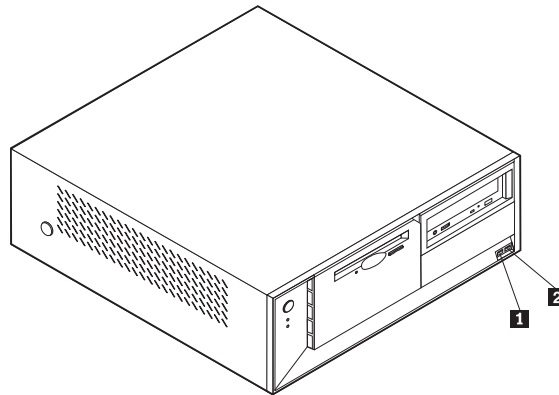
FRU replacements are to be done by trained service technicians only.

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

---

### Locating connectors on the front

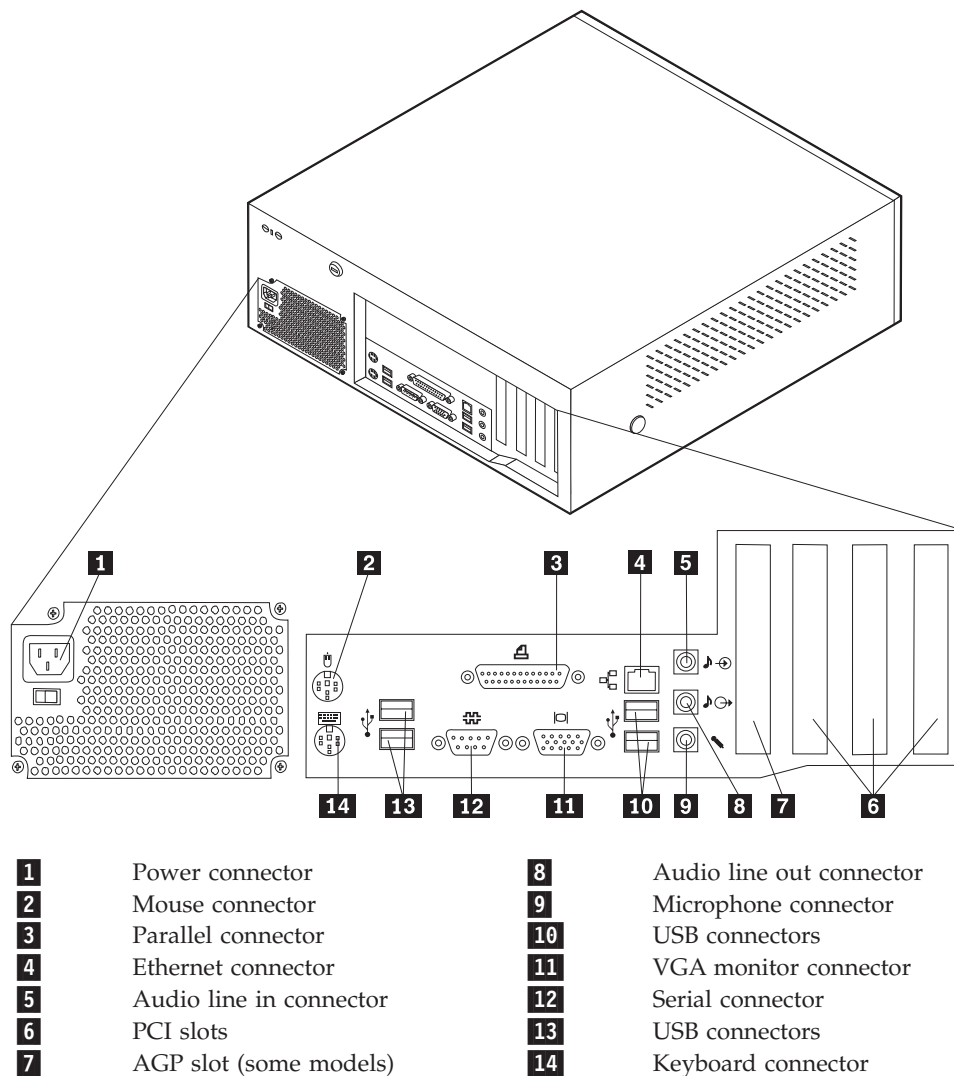
The following illustration shows the locations of the USB connectors on the front of the computer.



- 1** USB connector
- 2** USB connector

---

## Locating connectors on the rear



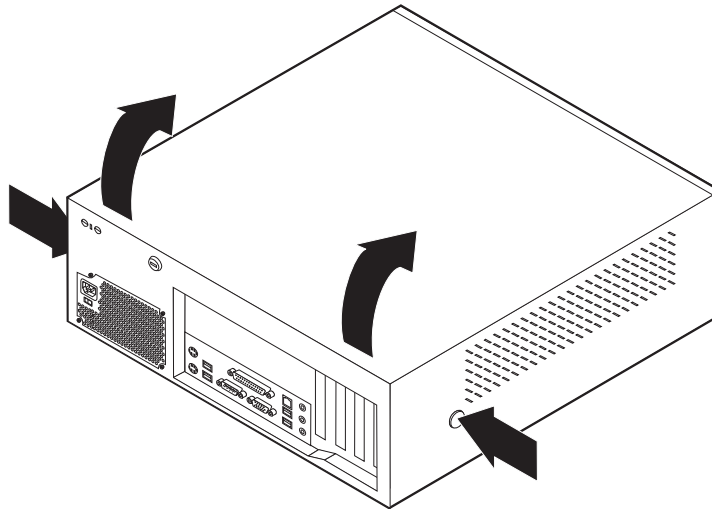
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## Removing the cover

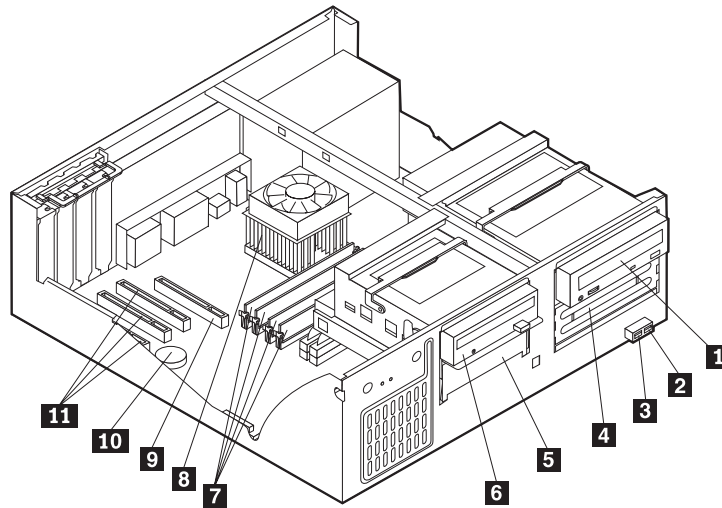
### Important

Read Chapter 2, “Safety information,” on page 5 and “Handling electrostatic discharge-sensitive devices” on page 8 before removing the cover.

1. Shut down your operating system, remove any media (diskettes, CDs, or tapes) from the drives, and turn off all attached devices and the computer.
2. Unplug all power cords from electrical outlets.
3. Disconnect all 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. Press the buttons on the sides of the computer and pivot the rear of the cover up and off of the computer.

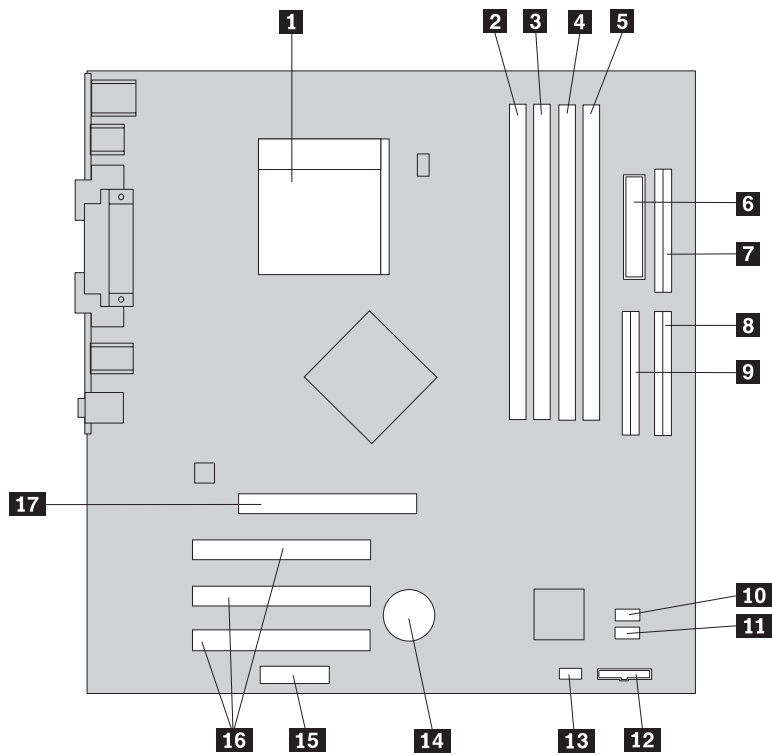


## Locating components



- |          |                       |           |                              |
|----------|-----------------------|-----------|------------------------------|
| <b>1</b> | CD drive or DVD drive | <b>7</b>  | DIMMs                        |
| <b>2</b> | USB connector         | <b>8</b>  | Microprocessor and heat sink |
| <b>3</b> | USB connector         | <b>9</b>  | AGP slot (some models)       |
| <b>4</b> | Optional drive bay    | <b>10</b> | Battery                      |
| <b>5</b> | Hard disk drive       | <b>11</b> | PCI slots                    |
| <b>6</b> | Diskette drive        |           |                              |

## Identifying parts on the system board

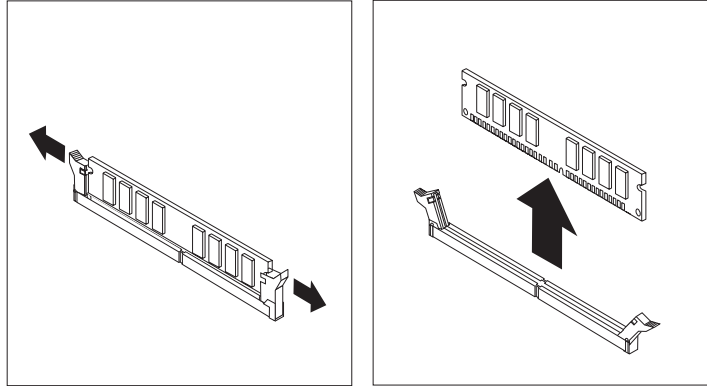


- |          |                       |           |                             |
|----------|-----------------------|-----------|-----------------------------|
| <b>1</b> | Microprocessor        | <b>9</b>  | Secondary IDE connector     |
| <b>2</b> | DIMM connector 1      | <b>10</b> | SATA1 connector             |
| <b>3</b> | DIMM connector 2      | <b>11</b> | SATA2 connector             |
| <b>4</b> | DIMM connector 3      | <b>12</b> | Power switch/LEDs connector |
| <b>5</b> | DIMM connector 4      | <b>13</b> | Clear CMOS/Recovery jumper  |
| <b>6</b> | Power connector       | <b>14</b> | Battery                     |
| <b>7</b> | Diskette drive        | <b>15</b> | Front panel audio connector |
| <b>8</b> | Primary IDE connector | <b>16</b> | PCI slots                   |
|          |                       | <b>17</b> | AGP slot (some models)      |

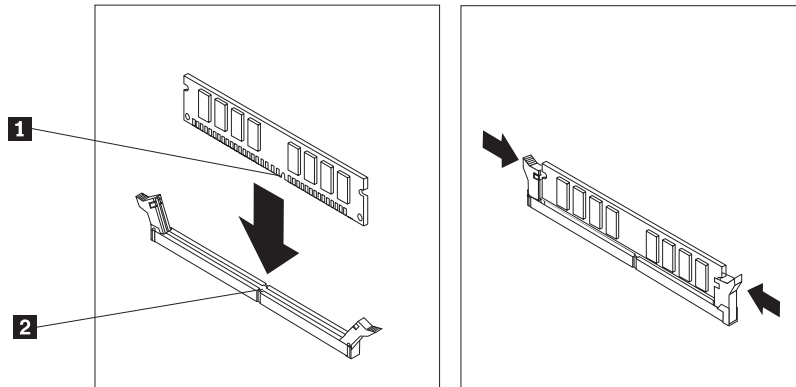
---

## Removing and replacing memory

1. Remove the cover. See “Removing the cover” on page 106.
2. To locate the DIMM connectors. See “Identifying parts on the system board” on page 108.
3. Open the retaining clips and remove the failing DIMM.



4. Make sure the notch **1** on the new DIMM is aligned correctly with the connector key **2** on the socket. Insert the DIMM straight down into the connector until it snaps into position and the retaining clips are closed.

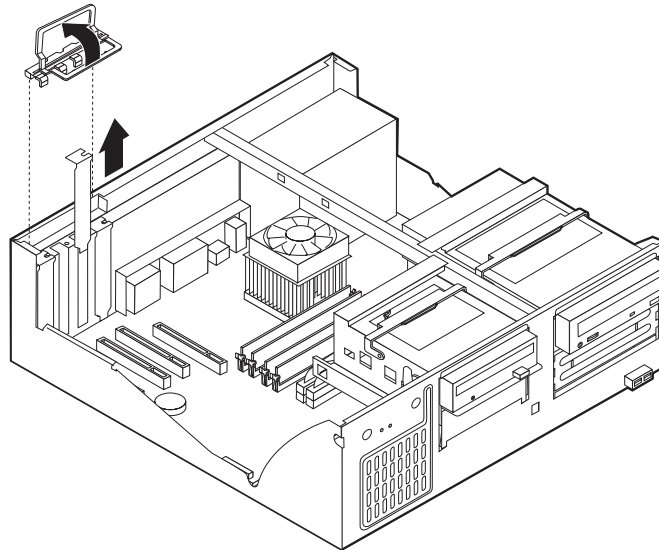


5. Go to “Installing the cover and connecting cables” on page 116.

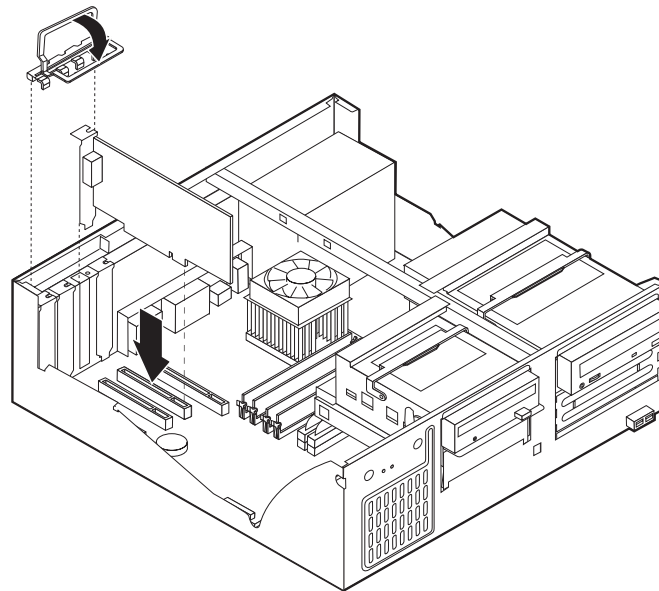
---

## Removing and replacing a PCI adapter

1. Remove the cover. See “Removing the cover” on page 106.
2. Open and remove the adapter-slot-cover latch and remove the failing adapter.



3. Remove the new adapter from its static-protective package.
4. Install the new adapter into the appropriate slot on the system board.
5. Install and close the adapter-slot-cover latch.



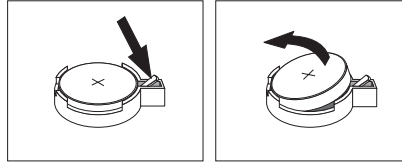
6. Go to “Installing the cover and connecting cables” on page 116.

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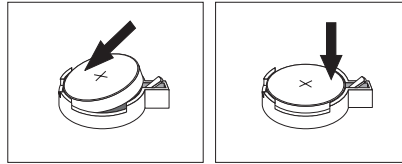
## Removing and replacing the battery

1. Remove the cover. See “Removing the cover” on page 106.
2. Locate the battery. See “Identifying parts on the system board” on page 108.
3. If necessary, remove any adapters that impede access to the battery. See “Removing and replacing a PCI adapter” for more information.
4. Remove the old battery.





5. Install the new battery.



6. Replace any adapters that were removed to gain access to the battery.
7. Go to “Installing the cover and connecting cables” on page 116.

**Note:** Use the Setup Utility program to set the date and time and any passwords. See Chapter 6, “Using the Setup Utility,” on page 55.

---

## Removing and replacing the power supply

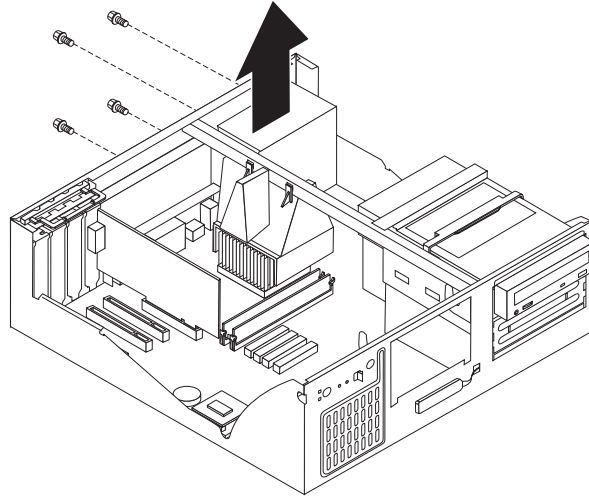
### Attention

Never remove the cover on a power supply or any part that has the following label attached.



Hazardous voltage, current, and energy levels are present inside any component that has this label attached. There are no serviceable parts inside these components.

1. Remove the cover. See “Removing the cover” on page 106.
2. Disconnect all power supply cables from the system board and the drives. See “Identifying parts on the system board” on page 108.
3. Remove the four screws that hold the power supply in place.
4. Lift the power supply out.

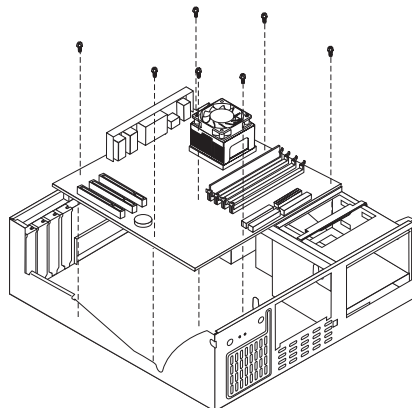


5. Install the new power supply and insert the four screws that hold the power supply in place.
6. Reconnect all power supply cables to the system board and the drives. See "Identifying parts on the system board" on page 108.
7. Go to "Installing the cover and connecting cables" on page 116.

---

## Removing and replacing the system board

1. Remove the cover. See "Removing the cover" on page 106.
2. Remove any PCI adapters installed. See "Removing and replacing a PCI adapter" on page 110.
3. 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. See "Identifying parts on the system board" on page 108.
4. Disconnect all cables connected to the system board.
5. Remove the screws that secure the system board in place and remove the system board.



6. Take note of the location of the DIMMs and remove them from the failing system board and install them on the new system board in the same location as they were on the failing system board. See "Removing and replacing memory" on page 109.
7. Remove the heat sink and microprocessor from the failing system board and install them on the new system board. See "Removing and replacing the

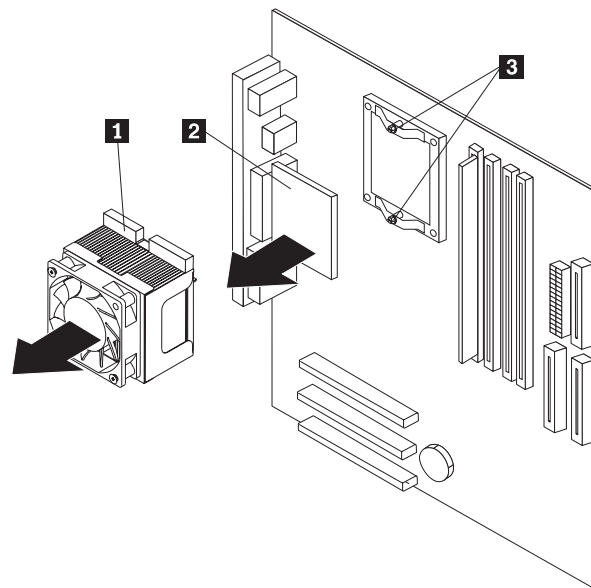
microprocessor.” Continue to the next step after installing the heat sink and microprocessor on the new system board.

8. Install the new system board into the chassis and insert the screws.
9. Reconnect all cables to the system board. See “Identifying parts on the system board” on page 108.
10. Go to “Installing the cover and connecting cables” on page 116.

---

## Removing and replacing the microprocessor

1. Turn off the computer and peripheral devices and disconnect all external cables and power cords; then, remove the cover. See “Removing the cover” on page 106.
2. Remove any air baffles or ducts that cover the microprocessor.
3. Disconnect the heat sink fan cable from the system board. Refer to “Identifying parts on the system board” on page 108.
4. Loosen the two captured screws **3** holding the fan and heat sink in place, and pivot them to the side.



5. To remove the fan and heat sink **1** from the microprocessor **2**, gently twist the fan and heat sink to break the seal formed by the thermal grease and remove.

**Note:** If the thermal grease seal cannot be broken, you may want to start up the system to heat the processor and loosen the thermal grease.

6. Place the heat sink on a clean work surface.
7. Take notice of the orientation of the beveled corner on the microprocessor. This is important when reinstalling the microprocessor on the system board.
8. Release the microprocessor from the system board by pulling outward and lifting the small handle on the microprocessor socket to its maximum vertical position. Carefully lift the microprocessor off the socket.
9. Make sure that the microprocessor socket handle is fully in the vertical position. Otherwise the microprocessor pins might be damaged when installing the microprocessor.
10. Position the microprocessor so that the pins are aligned with the socket and with the beveled corner in the correct orientation.

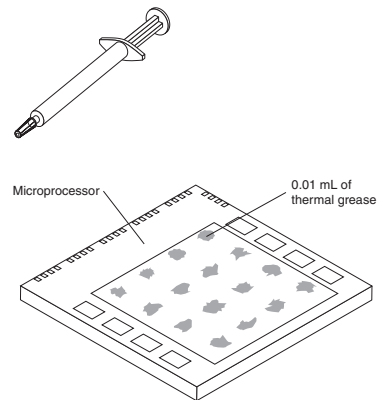
11. Lower the handle until it is fully in the down position and locked into the socket. This secures the microprocessor in the socket.
12. Remove the cleaning pad from its package and use the cleaning pad to wipe the thermal grease from the bottom of the heat sink.

**Notes:**

- a. The cleaning pad and thermal grease are separate FRUs and are not included with the system board or microprocessor FRUs. These must be ordered separately and shipped along with the FRUs being replaced.
- b. Be sure that all of the thermal grease is removed.

**Note:** 0.01ML is one tick mark on the syringe. If the grease is properly applied, approximately half (0.22ML) of the grease will remain in the syringe.

13. Use the thermal grease syringe to place 16 uniformly spaced dots of 0.01ML each on the top of the microprocessor.



14. Place the fan and heat sink into position on the microprocessor.
15. When tightening the screws that clamp the heat sink, do not overtighten. Tighten the clamp screws evenly by tightening one side some and then the other until they are both snug.
16. Reconnect the fan to the system board connector.
17. Replace any air baffles or ducts that were removed.
18. Go to "Installing the cover and connecting cables" on page 116.

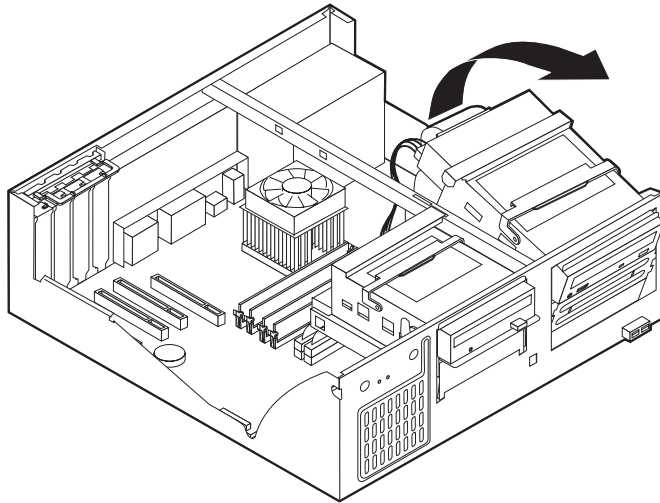
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## Removing and replacing drives

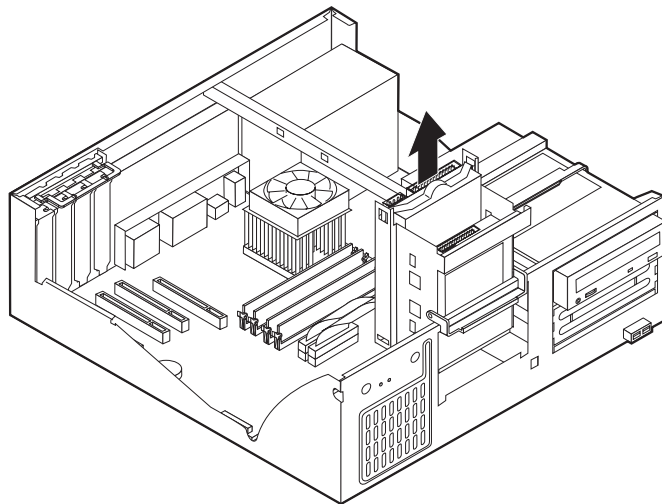
1. Remove the cover. See "Removing the cover" on page 106.
2. Pivot the drive-bay latch handle toward the front of the computer and then pivot the appropriate drive-bay cage upward, as shown, until latched in the upright position.

**Notes:**

- a. Both drive-bay cages pivot in the same manner.
- b. You can lift the drive-bay cages out of the chassis to make it easier to remove and install the drives.
- c. Take note of the location of any cables you disconnect. You might have to disconnect cables to other drives to gain access to the drive you are removing.



3. Disconnect the signal cable and power supply cable from the drive being replaced.
4. Remove any screws that secure the drive. Not all drives have screws.

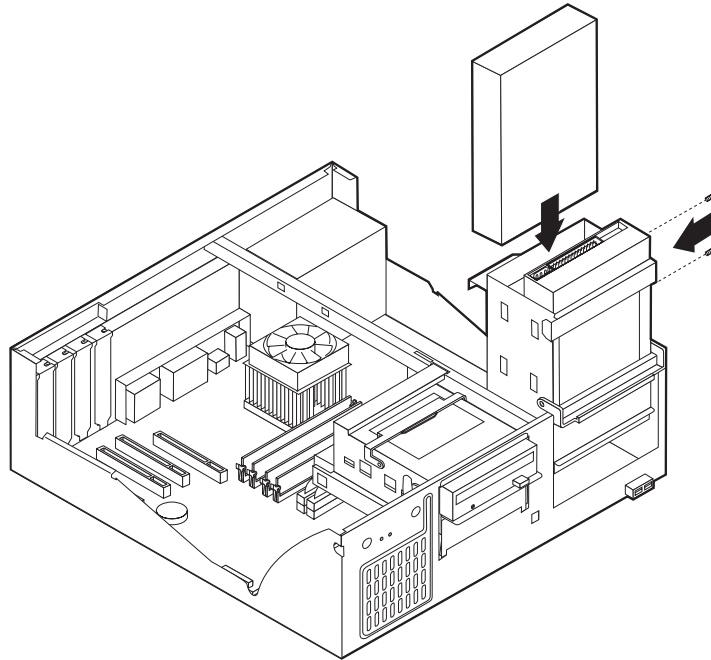


5. Make sure the drive that you are installing is set correctly as either a master or a slave device. Jumper the new drive the same as the drive being replaced.

**Note:** If you are installing a serial ATA drive, no master/slave jumpering is necessary.

Refer to the documentation that comes with your drive for master/slave jumper information.

6. Install the drive into the bay as shown.



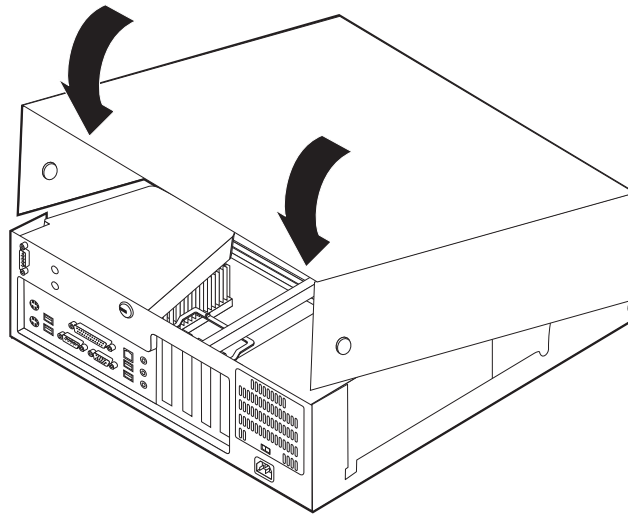
7. Secure the new drive (if necessary) with the screws that were removed.
8. If necessary, place the drive-bay cages back into the chassis.
9. Go to “Installing the cover and connecting cables.”

---

## Installing the cover and connecting cables

After replacing FRUs, you need to install any removed parts, replace the cover, and reconnect cables, including telephone lines and power cords. Also, depending on the option that is installed, you might need to confirm the updated information in the Setup Utility program.

1. Ensure that all components have been reassembled correctly and that no tools or loose screws are left inside the computer.
2. Clear any cables that might impede the replacement of the cover.
3. Lower the drive-bay cages to the normal position.
4. Position the cover over the chassis and pivot it down over the computer until it snaps into place.



5. Reconnect the external cables and power cords to the computer.
6. To update the configuration, see Chapter 6, “Using the Setup Utility,” on page 55.





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## Chapter 10. Replacing FRUs (Types 8084, 8085, 8147, 8148, and 8179)

**Important:**

Before you replace any FRU, read Chapter 2, "Safety information," on page 5. These precautions and guidelines will help you work safely.

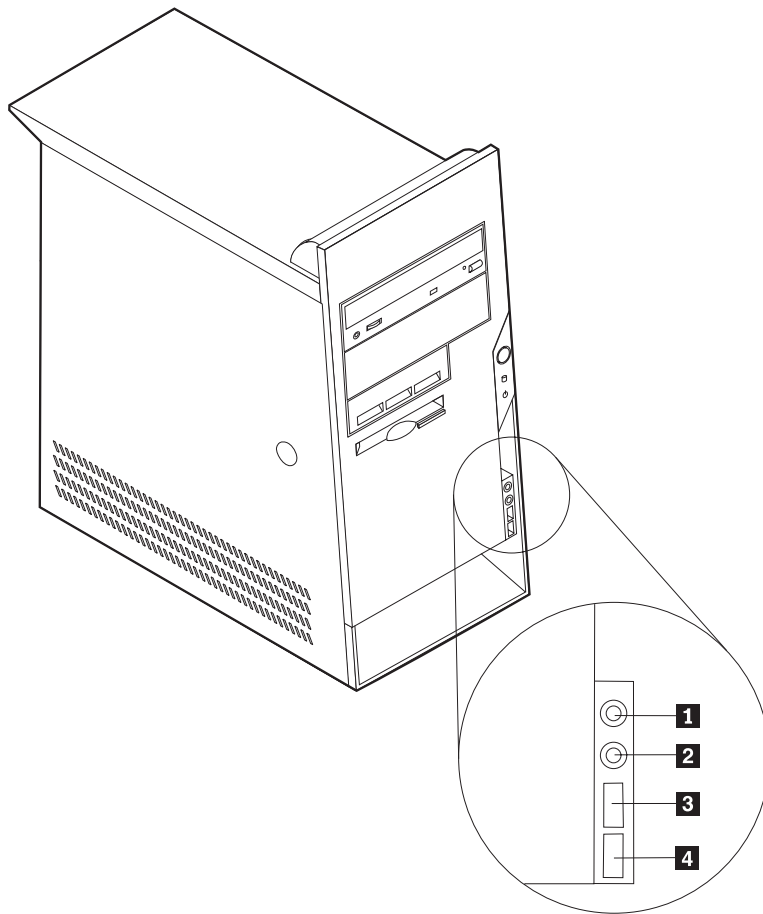
FRU replacements are to be done by trained service technicians only.

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

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## Locating connectors on the front

The following illustration shows the locations of the connectors on the front of the computer.

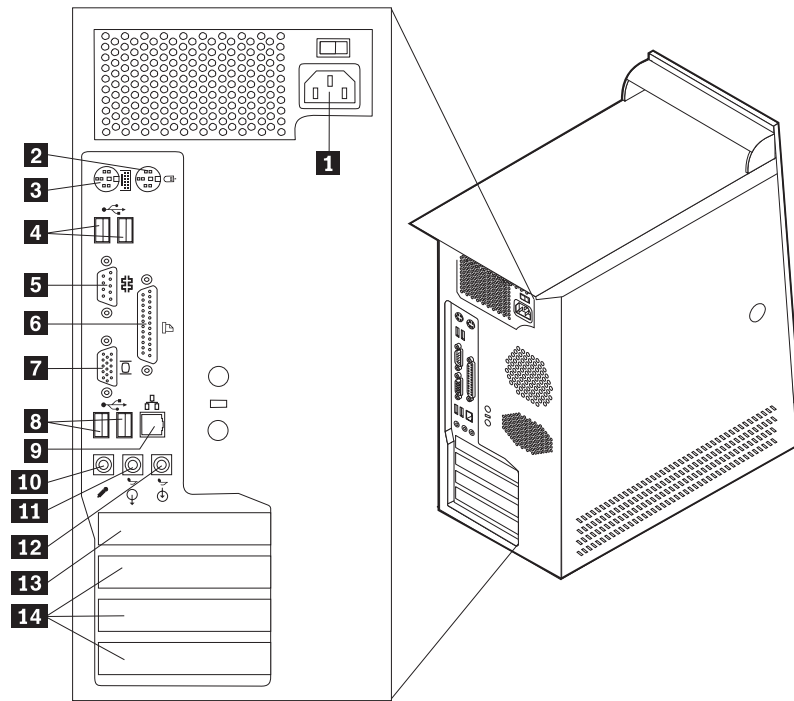


**1** Microphone connector  
**2** Headphone connector

**3** USB connector  
**4** USB connector

---

## Locating the connectors on the rear



- 1** Power connector
- 2** Mouse connector
- 3** Keyboard connector
- 4** USB connectors
- 5** Serial connector
- 6** Parallel connector
- 7** VGA monitor connector

- 8** USB connectors
- 9** Ethernet connector
- 10** Microphone connector
- 11** Audio line out connector
- 12** Audio line in connector
- 13** AGP slot (some models)
- 14** PCI slots

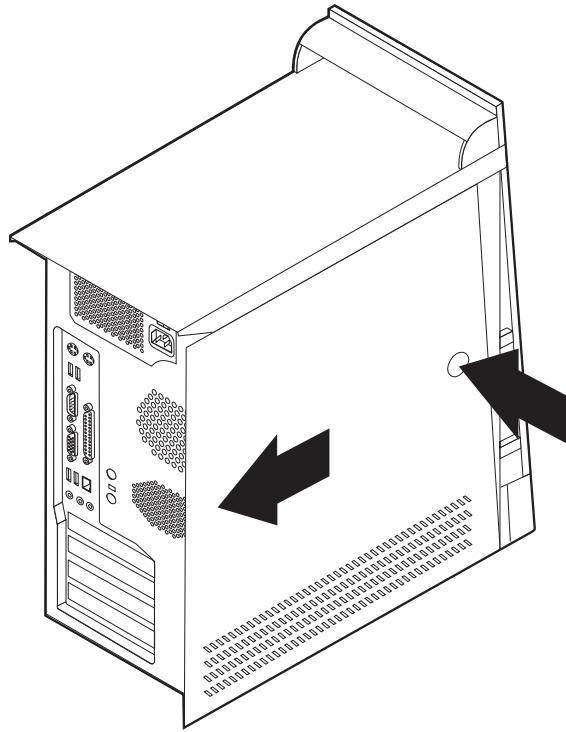
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## Removing the cover

### Important

Read Chapter 2, "Safety information," on page 5 and "Handling electrostatic discharge-sensitive devices" on page 8 before removing the cover.

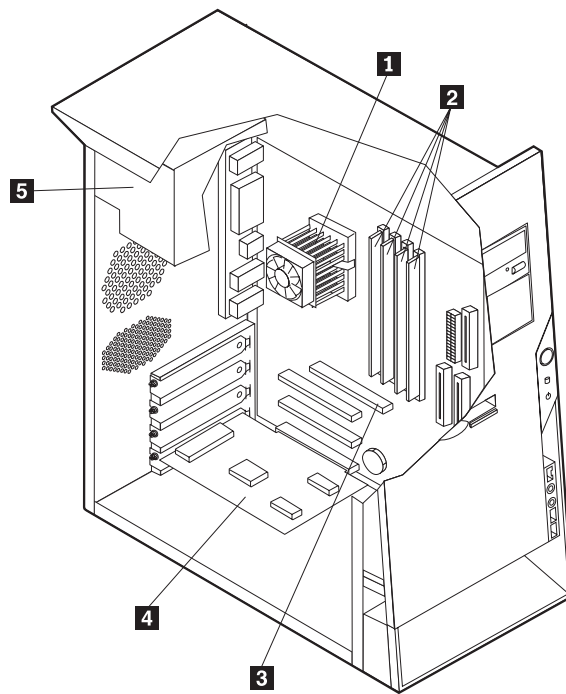
1. Shut down your operating system, remove any media (diskettes, CDs, or tapes) from the drives, and turn off all attached devices and the computer.
2. Unplug all power cords from electrical outlets.
3. Disconnect all cables attached to the computer. This includes power cords, input/output (I/O) cables, and any other cables that are connected to the computer.
4. Press the cover-release button and slide the cover to the rear to remove.



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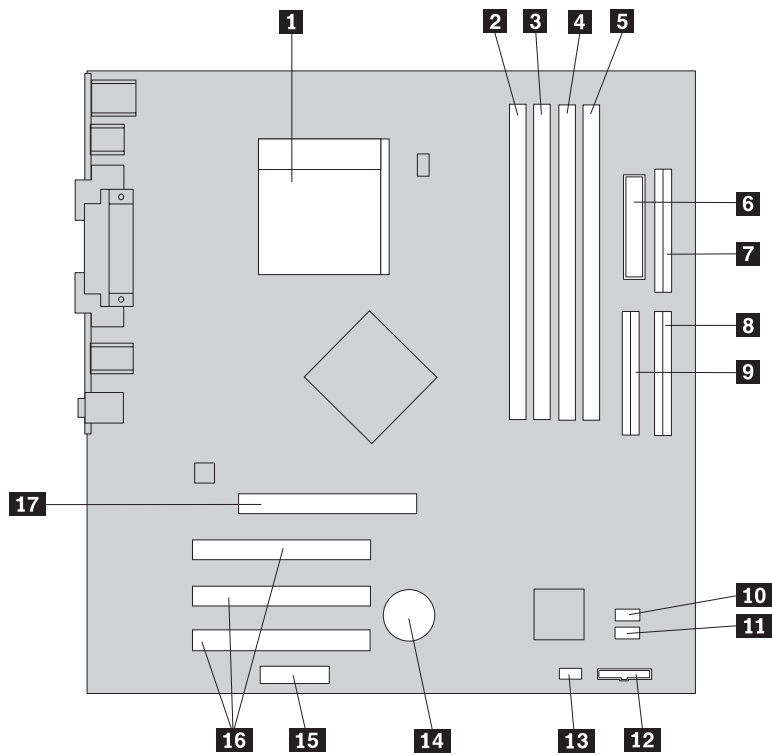
## Locating components

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



- 1** Microprocessor and heat sink
- 2** DIMMs
- 3** AGP slot (some models)
- 4** PCI adapter
- 5** Power supply

## Identifying parts on the system board

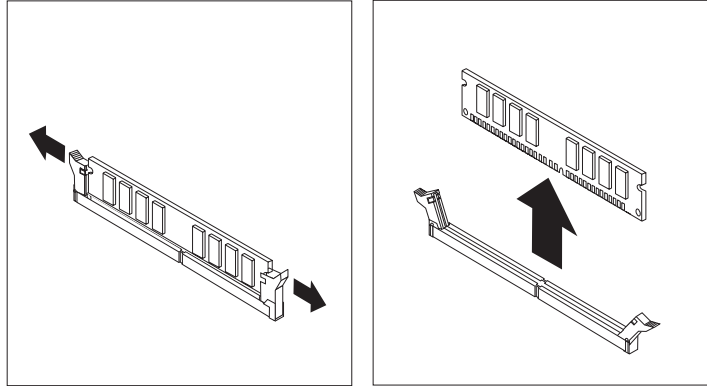


- |          |                       |           |                             |
|----------|-----------------------|-----------|-----------------------------|
| <b>1</b> | Microprocessor        | <b>9</b>  | Secondary IDE connector     |
| <b>2</b> | DIMM connector 1      | <b>10</b> | SATA1 connector             |
| <b>3</b> | DIMM connector 2      | <b>11</b> | SATA2 connector             |
| <b>4</b> | DIMM connector 3      | <b>12</b> | Power switch/LEDs connector |
| <b>5</b> | DIMM connector 4      | <b>13</b> | Clear CMOS/Recovery jumper  |
| <b>6</b> | Power connector       | <b>14</b> | Battery                     |
| <b>7</b> | Diskette drive        | <b>15</b> | Front panel audio connector |
| <b>8</b> | Primary IDE connector | <b>16</b> | PCI slots                   |
|          |                       | <b>17</b> | AGP slot (some models)      |

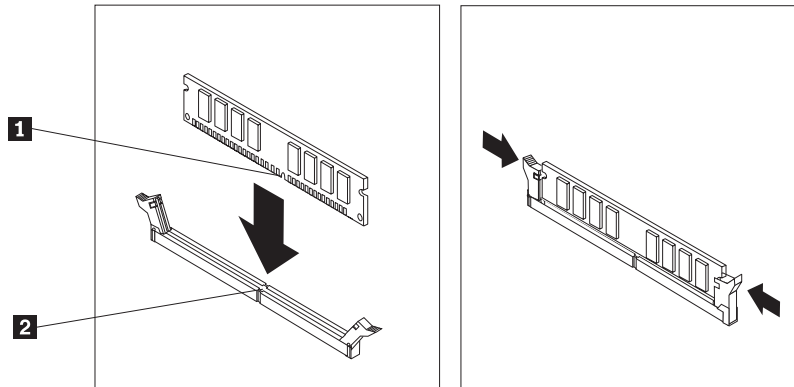
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## Removing and replacing memory

1. Remove the cover. See “Removing the cover” on page 121.
2. To locate the DIMM connectors. See “Identifying parts on the system board” on page 124.
3. Open the retaining clips and remove the failing DIMM.



4. Make sure the notch **1** on the new DIMM is aligned correctly with the connector key **2** on the socket. Insert the DIMM straight down into the connector until it snaps into position and the retaining clips are closed.



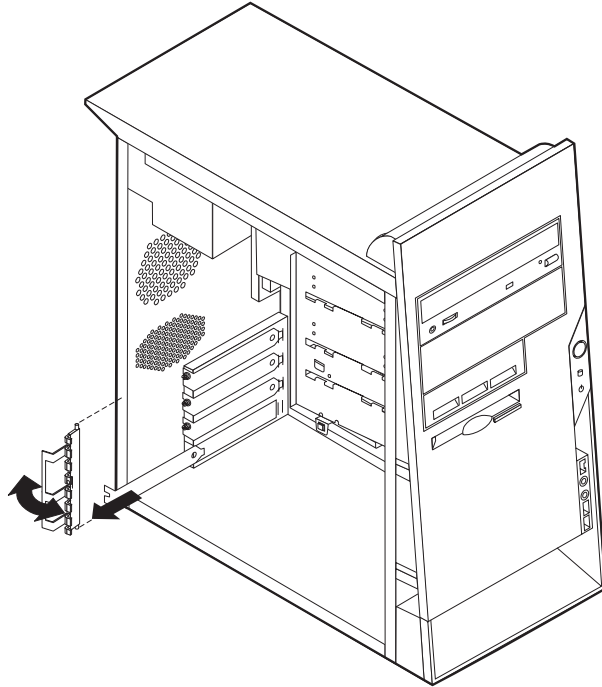
5. Go to “Closing the cover and connecting cables” on page 133.

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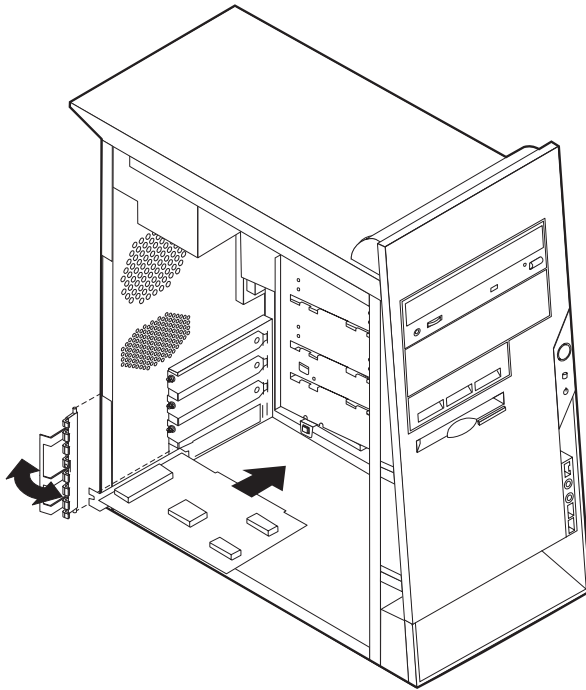
## Removing and replacing a PCI adapter

1. Remove the cover. See “Removing the cover” on page 121.

2. Open the adapter-slot-latch securing the adapter and remove the failing adapter.



3. Remove the new adapter from its static-protective package.
4. Install the new adapter into the appropriate slot on the system board and secure the adapter with the adapter-slot-latch.



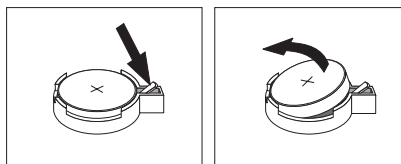
5. Go to “Closing the cover and connecting cables” on page 133.



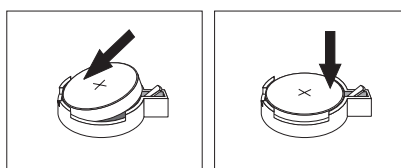
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## Removing and replacing the battery

1. Remove the cover. See “Removing the cover” on page 121.
2. Locate the battery. See “Identifying parts on the system board” on page 124.
3. If necessary, remove any adapters that impede access to the battery. See “Removing and replacing a PCI adapter” on page 125 for more information.
4. Remove the old battery.



5. Install the new battery.



6. Replace any adapters that were removed to gain access to the battery.
7. Go to “Closing the cover and connecting cables” on page 133

**Note:** Use the Setup Utility program to set the date and time and any passwords. See Chapter 6, “Using the Setup Utility,” on page 55.

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## Removing and replacing the power supply

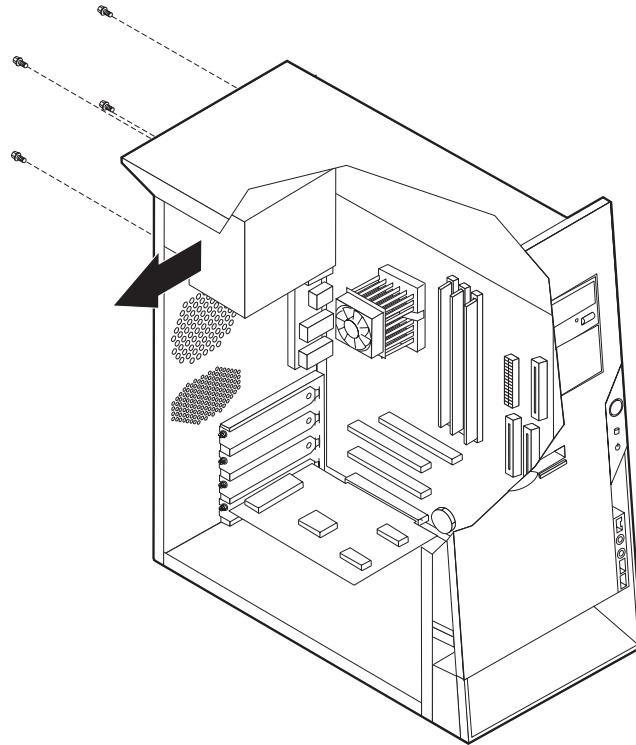
### Attention

Never remove the cover on a power supply or any part that has the following label attached.



Hazardous voltage, current, and energy levels are present inside any component that has this label attached. There are no servicable parts inside these components.

1. Remove the cover. See “Removing the cover” on page 121.
2. Disconnect all power supply cables from the drives.
3. Disconnect all power supply cables from the system board. See “Identifying parts on the system board” on page 124.
4. Support the power supply and remove the four screws that hold the power supply in place.
5. Remove the power supply.

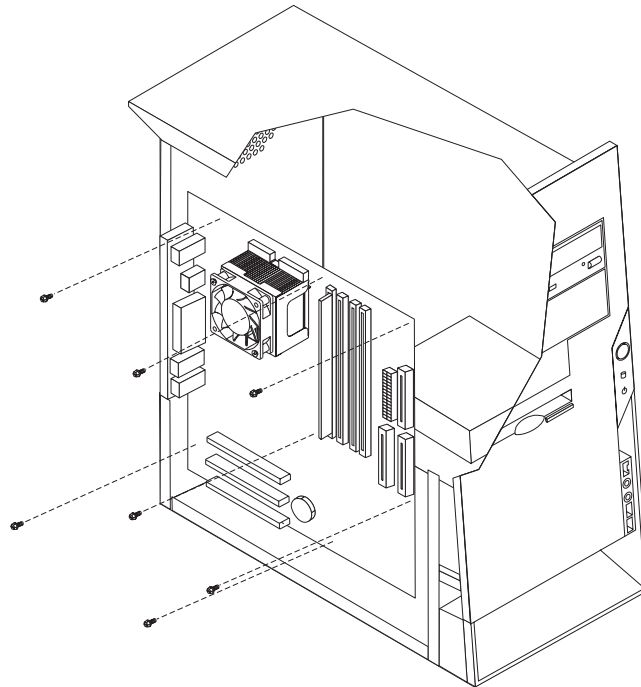


6. Install the new power supply and insert the four screws that hold the power supply in place.
7. Reconnect all power supply cables to the system board and the drives. See “Identifying parts on the system board” on page 124.
8. Go to “Closing the cover and connecting cables” on page 133.

---

## Removing and replacing the system board

1. Remove the cover. See “Removing the cover” on page 121.
2. Remove any PCI adapters installed. See “Removing and replacing a PCI adapter” on page 125.
3. 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. See “Identifying parts on the system board” on page 124.
4. Remove any air baffles or ducts.
5. Disconnect all cables connected to the system board.
6. Remove the screws that secure the system board in place and remove the system board.

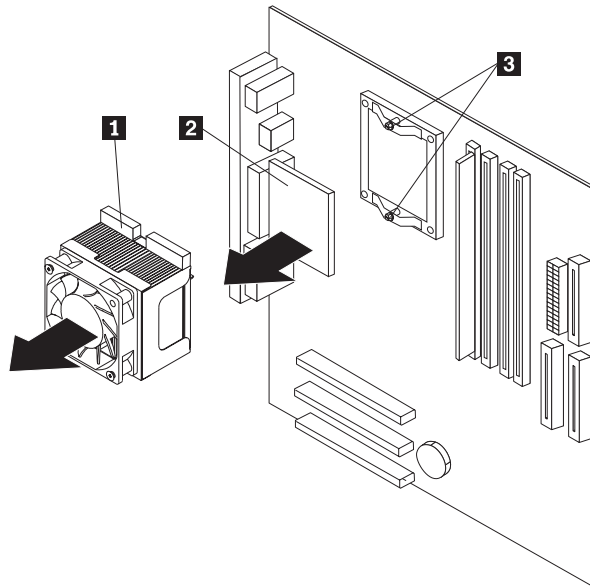


7. Take note of the location of the DIMMs and remove them from the failing system board and install them on the new system board in the same location as they were on the failing system board. See “Removing and replacing memory” on page 125.
8. Remove the heat sink and microprocessor from the failing system board and install them on the new system board. See “Removing and replacing the microprocessor.” Continue at the next step after installing the heat sink and microprocessor on the new system board.
9. Install the new system board and insert the screws.
10. Reconnect all cables to the system board.
11. Replace any air baffles or ducts.
12. Go to “Closing the cover and connecting cables” on page 133.

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## Removing and replacing the microprocessor

1. Remove the cover. See “Removing the cover” on page 121.
2. Remove any air baffles or ducts that cover the microprocessor.
3. Disconnect the heat sink fan cable from the system board. Refer to “Identifying parts on the system board” on page 124.



4. Loosen the two captured screws **3** holding the fan and heat sink in place, and pivot them to the side.
5. To remove the fan and heat sink **1** from the microprocessor **2**, gently twist the fan and heat sink to break the seal formed by the thermal grease and remove.

**Note:** If the thermal grease seal cannot be broken, you may want to start up the system to heat the processor and loosen the thermal grease.

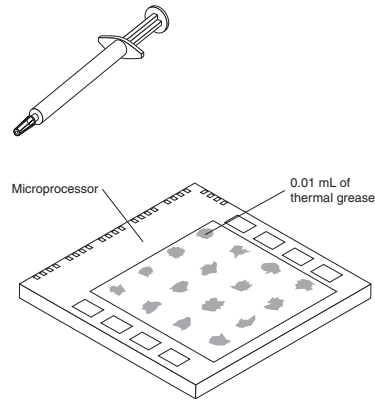
6. Place the heat sink on a clean work surface.
7. Take notice of the orientation of the beveled corner on the microprocessor. This is important when reinstalling the microprocessor on the system board.
8. Release the microprocessor from the system board by pulling outward and lifting the small handle on the microprocessor socket to its maximum vertical position. Carefully lift the microprocessor off the socket.
9. Make sure that the microprocessor socket handle is fully in the vertical position. Otherwise the microprocessor pins might be damaged when installing the microprocessor.
10. Position the microprocessor so that the pins are aligned with the socket and with the beveled corner in the correct orientation.
11. Lower the handle until it is fully in the down position and locked into the socket. This secures the microprocessor in the socket.
12. Remove the cleaning pad from its package and use the cleaning pad to wipe the thermal grease from the bottom of the heat sink.

**Notes:**

- a. The cleaning pad and thermal grease are separate FRUs and are not included with the system board or microprocessor FRUs. These must be ordered separately and shipped along with the FRUs being replaced.
- b. Be sure that all of the thermal grease is removed.

**Note:** 0.01ML is one tick mark on the syringe. If the grease is properly applied, approximately half (0.22ML) of the grease will remain in the syringe.

13. Use the thermal grease syringe to place 16 uniformly spaced dots of 0.01ML each on the top of the microprocessor.



14. Place the fan and heat sink into position on the microprocessor.
15. When tightening the screws that clamp the heat sink, do not overtighten. Tighten the clamp screws evenly by tightening one side some and then the other until they are both snug.
16. Reconnect the fan to the system board connector.
17. Replace any air baffles or ducts.
18. Go to “Closing the cover and connecting cables” on page 133.

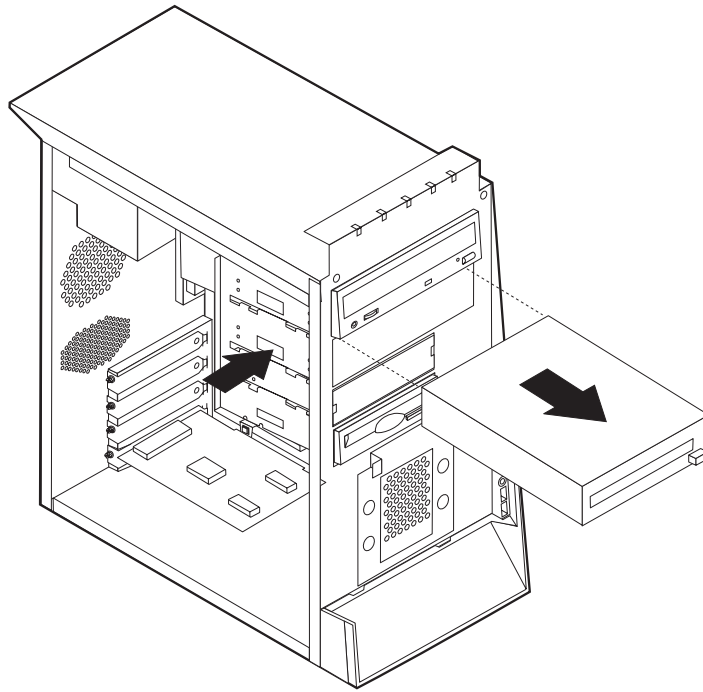
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## Removing and replacing drives

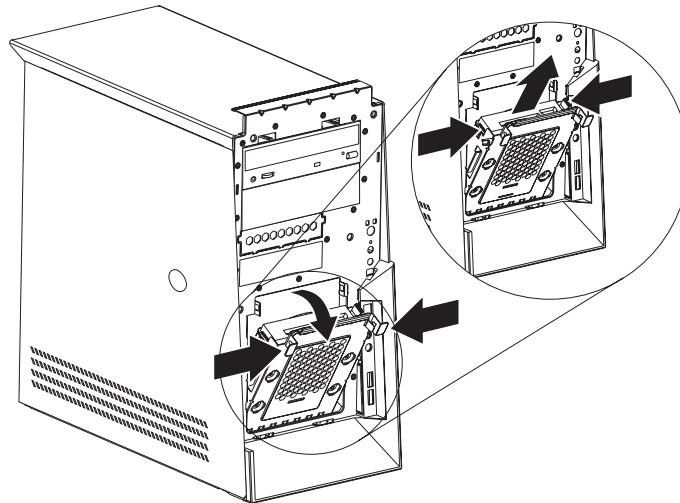
1. Remove the cover. See “Removing the cover” on page 121.
2. If you are removing a drive from bay 1 or bay 2, skip the next step.
3. Remove the front bezel by pushing in on the blue plastic tab at the rear of the chassis.
4. Disconnect the signal and power cables from the drive being removed.

**Note:** Take note of the location of any cables you disconnect. You might have to disconnect cables to other drives to gain access to the drive you are removing.

5. For all drives except the hard disk drive, push in on the metal tab that secures the drive being removed. The hard disk drive tray pivots out toward the front of the computer for removal of the hard disk drive. See the following illustrations.



For the hard disk drive, see the illustration below.



6. Slide the drive out the front of the computer.
7. Make sure the drive that you are installing is set correctly as either a master or a slave device. Jumper the new drive the same as the drive being replaced.

**Note:** If you are installing a serial ATA drive, no master/slave jumpering is necessary.

Refer to the documentation that comes with your drive for master/slave jumper information.

8. Slide the drive into the appropriate bay.
9. Reconnect the signal and power cables to the new drive.

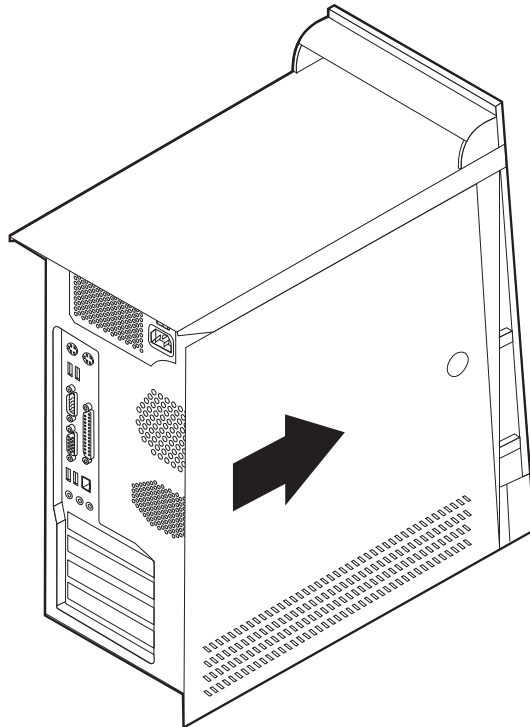
10. For bay 5 (hard disk drive), pivot the drive cage to the closed position.
11. If the front bezel was removed, replace it by aligning and pressing the bezel into position.
12. Go to “Closing the cover and connecting cables.”

---

## Closing the cover and connecting cables

After replacing FRUs, you need to install any removed parts, replace the cover, and reconnect any cables, including telephone lines and power cords. Also, depending on the FRU that is replaced, you might need to confirm the updated information in the Setup Utility program.

1. Ensure that all components have been reassembled correctly and that no tools or loose screws are left inside the computer.
2. Clear any cables that might impede the replacement of the cover.
3. Position the cover on the chassis so that the rail guides on the bottom of the cover engage the rails and push the cover closed until it latches.



4. Reconnect the external cables and power cords to the computer.
5. To update the configuration, see Chapter 6, “Using the Setup Utility,” on page 55.

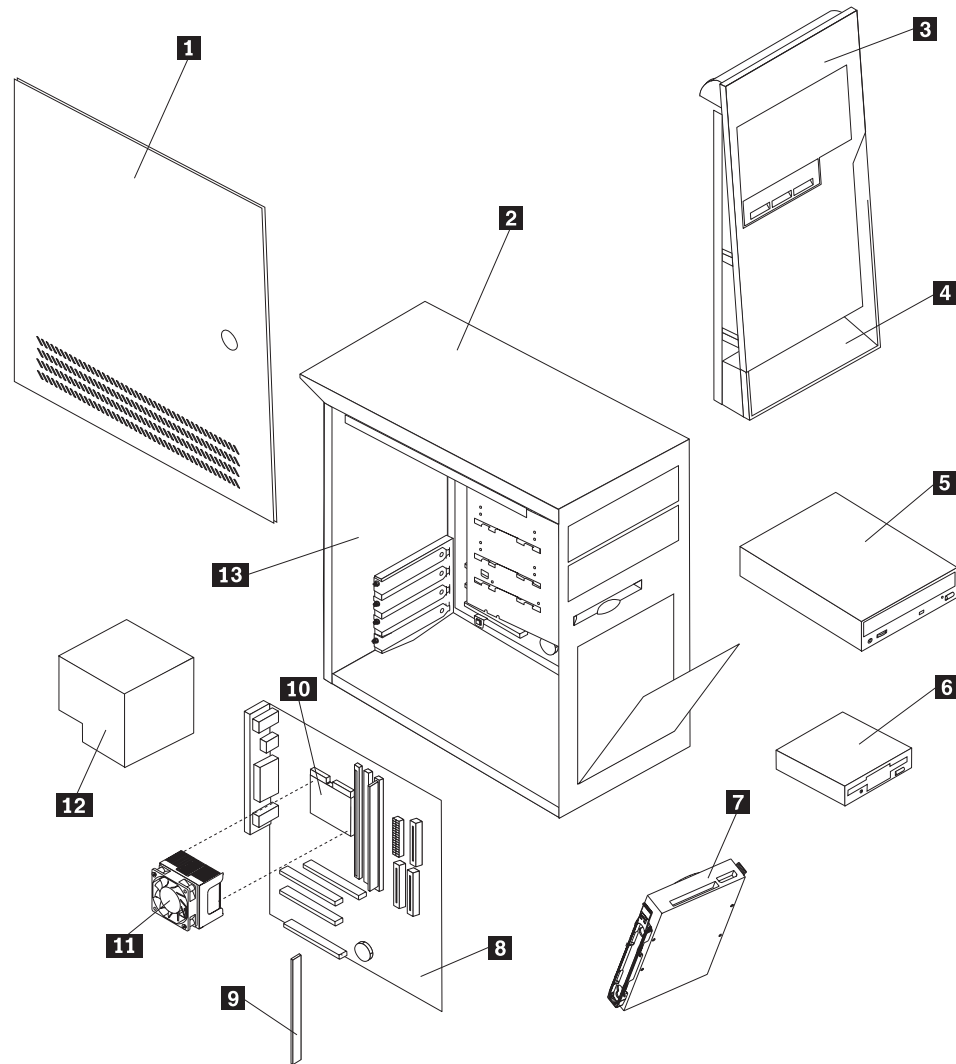




## Chapter 11. FRU lists

**Note:** A CRU (Customer Replaceable Unit) is identified by a single asterisk (\*) or two asterisks (\*\*) in the CRU ID column. An N in the CRU ID Column means that the part is not a CRU. A single asterisk (\*) means that the part is a Tier 1 CRU; two asterisks (\*\*) mean that the part is a Tier 2 CRU.

### Machine Type 8084



Item #	8084 FRUs	FRU#	CRU
<b>1</b>	Side cover assembly (all models)	59P8547	**
<b>2</b>	"L" Cover assembly (all models)	59P8546	**
<b>3</b>	Front Bezel assembly (all models)	59P8544	**
<b>4</b>	Bezel trim/label kit (all models)	49P1900	**

Item #	8084 FRUs	FRU#	CRU
5	CD-ROM Drive 48X (Black) - w/o volume ctrl and headphone jack (models 17S 23S 1BS 1AU 11U 12G 21G 24U A3G B1G B2G D4G E3G 41U 15G 18G 1CG 1DC 1EC 1FU 26G 31U 31G 73G 75G 76G 77G 78G 79G 7AG 7DG B2S D4S A4J E6G 33G 51G 53U 7KG 7NG 7PG D7U EAS 2AU 36U 37S EBG 7UG 7VG)	40Y8801	*
5	CD-ROM Drive 48X (Black) - w/o volume ctrl and headphone jack (models 17S 23S 1BS 1AU 11U 12G 21G 24U A3G B1G B2G D4G E3G 41U 15G 18G 1CG 1DC 1EC 1FU 26G 31U 31G 73G 75G 76G 77G 78G 79G 7AG 7DG B2S D4S A4J E6G 33G 51G 53U 7KG 7NG 7PG D7U EAS 2AU 36U 37S EBG 7UG 7VG)	40Y8805	*
5	CD-ROM Drive 48X (Black) - w/o volume ctrl and headphone jack (models 17S 23S 1BS 1AU 11U 12G 21G 24U A3G B1G B2G D4G E3G 41U 15G 18G 1CG 1DC 1EC 1FU 26G 31U 31G 73G 75G 76G 77G 78G 79G 7AG 7DG B2S D4S A4J E6G 33G 51G 53U 7KG 7NG 7PG D7U EAS 2AU 36U 37S EBG 7UG 7VG)	40Y8807	*
5	CD-ROM Drive 48X (Black) - w/o volume ctrl and headphone jack (models 17S 23S 1BS 1AU 11U 12G 21G 24U A3G B1G B2G D4G E3G 41U 15G 18G 1CG 1DC 1EC 1FU 26G 31U 31G 73G 75G 76G 77G 78G 79G 7AG 7DG B2S D4S A4J E6G 33G 51G 53U 7KG 7NG 7PG D7U EAS 2AU 36U 37S EBG 7UG 7VG)	40Y8813	*
5	CD-ROM Drive 48X (Black) - w/o volume ctrl and headphone jack (models 17S 23S 1BS 1AU 11U 12G 21G 24U A3G B1G B2G D4G E3G 41U 15G 18G 1CG 1DC 1EC 1FU 26G 31U 31G 73G 75G 76G 77G 78G 79G 7AG 7DG B2S D4S A4J E6G 33G 51G 53U 7KG 7NG 7PG D7U EAS 2AU 36U 37S EBG 7UG 7VG)	40Y8929	*
5	DVD-ROM Drive (16x\48x) (models 19G 22G 32G 72G 74G 7BG 7CG 7EG 7GG 7HG 7JG 52G 7QG 7RG 7SG 7TG)	40Y8811	*
5	DVD-ROM/CD-RW Combo Drive (48x\32x\48x\16x) (models 1GU)	40Y8781	*
5	DVD-ROM/CD-RW Combo Drive (48x\32x\48x\16x) (models 1GU)	40Y8903	*
6	Diskette drive, 3.5 1.44MB (models 17S 23S CTO-U CTO-G 1BS 1AU 21G 24U 15G 18G 19G 22G 31U 31G 32G 73G 74G 7BG 7CG 7EG D1S A1U A1F A2U A2F D2U D2F E1U E1F E2U E2F 11U 12G 13U 13F 14U 14F 25U 25F A3G B1G B2G D2U D2F D3U D3F D4G E3G 41U 1CG 1DC 1EC 1FU 26G 27U 27F 72G 75G 76G 77G 78G 79G 7AG 7DG 1GU B2S B3U B3F B4U B4F D4S D5U D5F D6U D6F E4U E4F E5U E5F 1HU 1HF 1JU 1JF 28U 28F 29U 29F 7GG 7HG 7JG A4J E6G 33G 34U 34F 35U 35F 51G 52G 53U 7KG 7NG 7PG 7QG D7U E8U E8F E9U E9F EAS 2AU 36U 37S EBG 7RG 7SG 7TG 7UG 7VG)	40Y9107	*
6	Diskette drive, 3.5 1.44MB (optional to 76H4091) (models 17S 23S CTO-U CTO-G 1BS 1AU 21G 24U 15G 18G 19G 22G 31U 31G 32G 73G 74G 7BG 7CG 7EG D1S A1U A1F A2U A2F D2U D2F E1U E1F E2U E2F 11U 12G 13U 13F 14U 14F 25U 25F A3G B1G B2G D2U D2F D3U D3F D4G E3G 41U 1CG 1DC 1EC 1FU 26G 27U 27F 72G 75G 76G 77G 78G 79G 7AG 7DG 1GU B2S B3U B3F B4U B4F D4S D5U D5F D6U D6F E4U E4F E5U E5F 1HU 1HF 1JU 1JF 28U 28F 29U 29F 7GG 7HG 7JG A4J E6G 33G 34U 34F 35U 35F 51G 52G 53U 7KG 7NG 7PG 7QG D7U E8U E8F E9U E9F EAS 2AU 36U 37S EBG 7RG 7SG 7TG 7UG 7VG)	40Y8899	*
6	Diskette drive, 3.5 1.44MB (optional to 76H4091) (models 17S 23S CTO-U CTO-G 1BS 1AU 21G 24U 15G 18G 19G 22G 31U 31G 32G 73G 74G 7BG 7CG 7EG D1S A1U A1F A2U A2F D2U D2F E1U E1F E2U E2F 11U 12G 13U 13F 14U 14F 25U 25F A3G B1G B2G D2U D2F D3U D3F D4G E3G 41U 1CG 1DC 1EC 1FU 26G 27U 27F 72G 75G 76G 77G 78G 79G 7AG 7DG 1GU B2S B3U B3F B4U B4F D4S D5U D5F D6U D6F E4U E4F E5U E5F 1HU 1HF 1JU 1JF 28U 28F 29U 29F 7GG 7HG 7JG A4J E6G 33G 34U 34F 35U 35F 51G 52G 53U 7KG 7NG 7PG 7QG D7U E8U E8F E9U E9F EAS 2AU 36U 37S EBG 7RG 7SG 7TG 7UG 7VG)	40Y9105	*

Item #	8084 FRUs	FRU#	CRU
7	Hard disk drive, 40GB EIDE (models D1S 1AU A1U A1F A2U A2F D2U D2F E1U E1F E2U E2F 11U 12G 13U 13F 14U 14F 21G 24U 25U 25F A3G B1G B2G D2U D2F D3U D3F D4G E3G 41U 15G 16G 18G 1CG 1DC 1EC 1FU 26G 27U 27F 31U 31G 73G 75G 76G 77G 78G 79G 7AG 7DG 1GU B2S B3U B3F B4U B4F D4S D5U D5F D6U D6F E4U E4F E5U E5F 1HU 1HF 1JU 1JF 28U 28F 29U 29F A4J E6G 33G 34U 34F 35U 35F 51G 53U 7KG 7NG 7PG D7U E8U E8F E9U E9F EAS 2AU 36U EBG 7RG 7SG 7TG 7UG 7VG)	40Y8757	*
7	Hard disk drive, 80GB EIDE (models 17S 23S 1BS 19G 22G 32G 72G 74G 7BG 7CG 7EG 7GG 7HG 7JG 52G 7QG 37S)	40Y8758	*
8	System board, 10/100 E-net (models 17S 23S CTO-U CTO-G 1BS 1AU 21G 24U 15G 18G 19G 22G 31U 31G 32G 73G 74G 7BG 7CG 7EG C5U C6U C7U 1GU 7HG 7JG 34U 34F 35U 35F 52G 53U 7QG C8U 2AU 36U 37S 7UG 7VG)	19R0703	**
8	System board,(10/100 Enet) w/ video buffer -- optional to 19R0703 (models 17S 23S CTO-U CTO-G 1BS 1AU 21G 24U 15G 18G 19G 22G 31U 31G 32G 73G 74G 7BG 7CG 7EG C5U C6U C7U 1GU 7HG 7JG 34U 34F 35U 35F 52G 53U 7QG C8U 2AU 36U 37S 7UG 7VG)	39J7965	**
8	System board,(10/100 Enet) w/ video buffer -- optional to 19R0703 (models 17S 23S CTO-U CTO-G 1BS 1AU 21G 24U 15G 18G 19G 22G 31U 31G 32G 73G 74G 7BG 7CG 7EG C5U C6U C7U 1GU 7HG 7JG 34U 34F 35U 35F 52G 53U 7QG C8U 2AU 36U 37S 7UG 7VG)	41D0948	**
8	System board, 10/100 E-net, no AGP (models D1S A1U A1F A2U A2F D2U D2F E1U E1F E2U E2F 11U 12G 13U 13F 14U 14F 25U 25F A3G B1G B2G D2U D2F D3U D3F D4G E3G 41U 16G 1CG 1DC 1EC 1FU 26G 27U 27F 72G 75G 76G 77G 78G 79G 7AG 7DG C1U C2U C3U C4U B2S B3U B3F B4U B4F D4S D5U D5F D6U D6F E4U E4F E5U E5F 1HU 1HF 1JU 1JF 28U 28F 29U 29F 7GG A4J E6G 33G 51G 7KG 7NG 7PG D7U E8U E8F E9U E9F EAS EBG 7RG 7SG 7TG)	19R0837	**
8	System board, (10/100 Enet) w/ video buffer, no AGP -- optional to 19R0837 (models D1S A1U A1F A2U A2F D2U D2F E1U E1F E2U E2F 11U 12G 13U 13F 14U 14F 25U 25F A3G B1G B2G D2U D2F D3U D3F D4G E3G 41U 16G 1CG 1DC 1EC 1FU 26G 27U 27F 72G 75G 76G 77G 78G 79G 7AG 7DG C1U C2U C3U C4U B2S B3U B3F B4U B4F D4S D5U D5F D6U D6F E4U E4F E5U E5F 1HU 1HF 1JU 1JF 28U 28F 29U 29F 7GG A4J E6G 33G 51G 7KG 7NG 7PG D7U E8U E8F E9U E9F EAS EBG 7RG 7SG 7TG)	39J7966	**
8	System board, (10/100 Enet) w/ video buffer, no AGP -- optional to 19R0837 (models D1S A1U A1F A2U A2F D2U D2F E1U E1F E2U E2F 11U 12G 13U 13F 14U 14F 25U 25F A3G B1G B2G D2U D2F D3U D3F D4G E3G 41U 16G 1CG 1DC 1EC 1FU 26G 27U 27F 72G 75G 76G 77G 78G 79G 7AG 7DG C1U C2U C3U C4U B2S B3U B3F B4U B4F D4S D5U D5F D6U D6F E4U E4F E5U E5F 1HU 1HF 1JU 1JF 28U 28F 29U 29F 7GG A4J E6G 33G 51G 7KG 7NG 7PG D7U E8U E8F E9U E9F EAS EBG 7RG 7SG 7TG)	41D0949	**
9	128 MB SDRAM (models D1S)	31P9120	*
9	256 MB SDRAM (models A1U A1F A2U A2F D2U D2F E1U E1F E2U E2F 11U 12G 13U 13F 14U 14G 25U 25F A3G B1G B2G D2U D2F D3U D3F D4G E3G 41U 15G 16G 1CG 1DC 1FU 27U 27F 72G 73G 74G 75G 76G 77G 78G 79G 7AG B2S B3U B3F B4U B4F D4S D5U D5F D6U D6F E4U E4F E5U E5F 1HU 1HF 1JU 1JF 7GG 7HG A4J E6G 7KG D7U E8U E8F E9U E9F EAS EBG 7RG 7SG 7TG)	31P9121	*
9	256 MB SDRAM (models 17S 23S 1BS 1AU 21G 24U 18G 19G 1EC 22G 26G 31U 31G 32G 7BG 7CG 7EG 7DG 7JG 33G 34U 34F 35U 35F 51G 52G 53U 7NG 7PG 7QG 2AU 36U 37S 7UG 7VG)	73P2683	*
9	512 MB SDRAM (models 1GU)	73P2684	*
10	Intel Celeron 2.4 GHz (models CTO-U CTO-G A1U A1F A2U A2F A3G 75G C1U)	88P7699	* *
10	Intel Celeron 2.5 GHz (models CTO-U CTO-G)	13R8905	* *

Item #	8084 FRUs	FRU#	CRU
10	Intel Celeron 2.6 GHz (models CTO-U CTO-G D1S D2U D2F D2U D2F D3U D3F C2U)	13R8907	* *
10	Intel Celeron 2.7 GHz (models CTO-U CTO-G)	13R8947	* *
10	Intel Celeron 2.8 GHz (models CTO-U CTO-G E1U E1F E2U E2F)	13R8963	* *
10	Intel Prescott Celeron 2.4 GHz (models A4J)	19R0780	* *
10	Intel Celeron 2.53GHz (models B1G B2G 76G CTO-U CTO-G B2S B3U B3F B4U B4F)	19R0417	* *
10	Intel Celeron 2.66GHz (models D4G 77G D4S D5U D5F D6U D6F D7U)	19R0419	* *
10	Intel Celeron 2.8GHz (models E3G 78G C3U E4U E4F E5U E5F 7RG)	19R0421	* *
10	Intel Prescott Celeron 2.93GHz (models CTO-U CTO-G E6G 7KG 7SG)	29R6989	* *
10	Intel Prescott Celeron 3.06GHz (models CTO-U CTO-G E8U E8F E9U E9F EAS EBG 7TG)	29R6990	* *
10	Intel P4 2.6 GHz (models CTO-U CTO-G 41U)	73P0574	* *
10	Intel P4 2.8 GHz (models CTO-U CTO-G 1FU 72G)	19R2302	* *
10	Intel P4 2.66 GHz (models CTO-U CTO-G)	74P1629	* *
10	Intel P4 2.8 GHz (models CTO-U CTO-G 1BS 1AU 11U 12G 13U 13F 14U 14F 79G C4U)	74P1631	* *
10	Intel P4 3.06 GHz (models CTO-U CTO-G 25U 25F 27U 27F)	74P1633	* *
10	Intel P4 2.4 GHz (models CTO-U CTO-G)	88P5867	* *
10	Intel P4 2.6 GHz (models CTO-U CTO-G)	88P5868	* *
10	Intel P4 2.8 GHz (models CTO-U CTO-G)	88P5869	* *
10	Intel P4 3.0 GHz (models CTO-U CTO-G)	88P5870	* *
10	Intel P4 3.2 GHz (models CTO-U CTO-G)	88P5871	* *
10	Intel Prescott P4 2.8 GHz (models CTO-U CTO-G 15G 16G 1CG 1DC 73G 74G 7AG 1HU 1HF 1JU 1JF 7GG 7HG)	19R0423	* *
10	Intel Prescott P4 2.8 GHz (models 17S CTO-U CTO-G 18G 19G 1EC 7BG C5U 1GU)	19R0292	* *
10	Intel Prescott P4 3.0 GHz (models 23S CTO-U CTO-G 21G 22G 24U 26G 7CG C6U 7DG 28U 28F 29U 29F 7JG 2AU 7UG)	19R0294	* *
10	Intel Prescott P4 3.2 GHz (models CTO-U CTO-G 31U 31G 32G 7EG C7U 33G 34U 34F 35U 35F 7NG 36U 37S 7VG)	19R0296	* *
10	Intel Prescott P4 3.4 GHz (models CTO-U CTO-G 51G 52G 53U 7PG 7QG C8U)	29R6991	* *
11	Heat sink and fan and fan, Northwood <3.0 GHZ (models D1S D2U D2F D2U D2F D3U D3F C2U E1U E1F E2U E2F 41U 1FU 72G 1BS 1AU 11U 12G 13U 13F 14U 14F 79G C4U CTO-U CTO-G)	32P4004	* *
11	Heat sink and fan, Northwood >=3.0 GHZ and all Prescott (models 17S 23S 21G 24U 15G 16G 1CG 1DC 73G 74G 7AG 18G 19G 1EC 7BG C5U 31U 31G 32G 7EG C7U 1GU B1G B2G 76G D4G 77G E3G 78G C3U 1HU 1HF 1JU 1JF 28U 28F 29U 29F 7JG 7GG 7HG B2S B3U B3F B4U B4F D4S D5U D5F D6U D6F E4U E4F E5U E5F A4J E6G 7KG 33G 34U 34F 35U 35F 7NG 51G 52G 53U 7PG 7QG C8U 7DG 22G 24U 26G 7CG C6U 25U 25F 27U 27F CTO-U CTO-G D7U E8U E8F E9U E9F EAS 2AU 36U 37S EBG 7TG 7RG 7SG 7UG 7VG)	13R9195	* *

Item #	8084 FRUs	FRU#	CRU
<b>11</b>	Heat sink and fan, Northwood >=3.0 GHZ and all Prescott, Dual Heat Pipe -- optional to 13R9195 (models 17S 23S 21G 24U 15G 16G 1CG 1DC 73G 74G 7AG 18G 19G 1EC 7BG C5U 31U 31G 32G 7EG C7U 1GU B1G B2G 76G D4G 77G E3G 78G C3U 1HU 1HF 1JU 1JF 28U 28F 29U 29F 7JG 7GG 7HG B2S B3U B3F B4U B4F D4S D5U D5F D6U D6F E4U E4F E5U E5F A4J E6G 7KG 33G 34U 34F 35U 35F 7NG 51G 52G 53U 7PG 7QG C8U 7DG 22G 24U 26G 7CG C6U 25U 25F 27U 27F CTO-U CTO-G D7U E8U E8F E9U E9F EAS 2AU 36U 37S EBG 7TG 7RG 7SG 7UG 7VG)	13N2951	* *
<b>12</b>	Power supply, AcBel PFC, 230W (models 1AU A1U A1F A2U A2F D2U D2F E1U E1F E2U E2F 11U 12G 13U 13F 14U 14F 21G 24U 25U 25F A3G B1G B2G D2U D2F D3U D3F D4G E3G 41U 15G 16G 18G 19G 1CG 1FU 22G 26G 27U 27F 31U 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG C1U C2U C3U C4U C5U C6U C7U 1GU B3U B3F B4U B4F D5U D5F D6U D6F E4U E4F E5U E5F 1HU 1HF 1JU 1JF 28U 28F 29U 29F 7GG 7HG 7JG A4J E6G 33G 34U 34F 35U 35F 51G 52G 53U 7KG 7NG 7PG 7QG C8U D7U E8U E8F E9U E9F 2AU 36U EBG 7RG 7SG 7TG 7UG 7VG)	74P4300	N
<b>12</b>	Power supply, AcBel China, 230W (models 17S 23S D1S 1BS 1DC 1EC B2S D4S EAS 37S)	74P4301	N
<b>13</b>	Chassis assembly (all models)	59P8542	**

The FRUs listed in the following table are not illustrated.

8084 FRUs	FRU#	CRU
Front bezel release kit (all models)	25P0069	**
Retainer, Adapter Cards (all models)	59P8564	**
Speaker assembly (models D7U EAS 37S 2AU 36U)	00N5151	**
Cable, audio (all models)	75H9219	**
5.25 EMC shield (all models)	19K5548	**
Rubber foot (all models)	03K9655	**
Universal adapter bracket (all models)	32P4743	**
Bezel blanks kit (all models)	25P0068	**
80 mm fan assembly (models with 3.06 GHz microprocessor or greater)	22P4447	**
2 audio front panel (models 17S 23S 7GG 7HG 7JG E6G 33G 34U 34F 35U 35F 51G 52G 53U 7KG 7NG 7PG 7QG C8U D5U 2AU 36U)	49P1750	**
Cable, audio assembly (all models)	49P1933	**
Cable, dual USB 2.0 (all models)	49P4365	**
Hard disk drive bracket assembly (all models)	59P8543	**
Hard disk drive tray (all models)	59P8549	**
Power switch assembly (all models)	59P8545	**
Bezel, Diskette drive (all models)	59P8548	**
Cable, 2 drop (close spacing) ATA 66/100 w/pull tabs (all models)	59P8571	*
Cable, 2 drop** (large spacing) ATA 66/100 w/pull tabs (all models)	59P8572	*
Cable, Diskette drive (all models)	59P8568	*
Battery, 3.0 V (all models)	33F8354	**
Mouse, 2 button, black (models A1U A1F A2U A2F D2U D2F E1U E1F E2U E2F 13U 13F 14U 14F 25U 25F D3U D3F 27U 27F B3U B3F B4U B4F D5U D5F D6U D6F E4U E4F E5U E5F 1HU 1HF 1JU 1JF 28U 28F 29U 29F 34U 34F 35U 35F E8U E8F E9U E9F)	24P0383	*

8084 FRUs	FRU#	CRU
Mouse, optical wheel (models 17S 23S D1S 1BS 1AU 11U 21G 24U 41U 15G 19G 1DC 1EC 1FU 22G 31U 31G 32G 73G 74G 7BG 7CG 7EG A3G B1G B2G D4G E3G 12G 16G 18G 1CG 26G 72G 75G 76G 77G 78G 79G 7AG 7DG 1GU B2S D4S 7GG 7HG 7JG A4J E6G 33G 51G 52G 53U 7KG 7NG 7PG 7QG D7U EAS 2AU 36U 37S EBG 7RG 7SG 7TG 7UG 7VG)	89P5089	*
Cable clip (all models)	59P8584	*
System board EMC shield kit (all models)	89P4761	**
Retention kit (all models)	89P6740	**
Heatsink grease, Heat pipe (all models)	13R9195	**
Misc. hardware kit (all models)	09N5764	**
PCI Modem Card (Soft), ATX (models D7U 2AU 36U)	22P7943	*
PCI Serial Port Adapter (models CTO-U CTO-G)	73P3974	*
128 MB AGP ATX VGA DVI-I S-VIDEO (models CTO-U CTO-G)	29R7236	*
RJ11 connector adapter (Spain, Ireland) (All "G" models)	60H6043	*
RJ11 connector adapter (Austria) (All "G" models)	60H6045	*
RJ11 connector adapter (Belgium) (All "G" models)	60H6046	*
RJ11 connector adapter (Denmark) (All "G" models)	60H6047	*
RJ11 connector adapter (Norway, Finland) (All "G" models)	60H6048	*
RJ11 connector adapter (France) (All "G" models)	60H6049	*
RJ11 connector adapter (Germany) (All "G" models)	60H6050	*
RJ11 connector adapter (UK, NZ, HK) (All "G", "M", "B", "H" models)	60H6051	*
RJ11 connector adapter (Italy) (All "G" models)	60H6052	*
RJ11 connector adapter (Netherlands) (All "G" models)	60H6053	*
RJ11 connector adapter (Sweden) (All "G" models)	60H6054	*
RJ11 connector adapter (Switzerland) (All "G" models)	60H6055	*

8084 Windows XP Home Recovery CDs	FRU#	CRU
US/UK/AP/TH (models A2U D2U E2U 13U 25U D2U B4U D6U E5U 1HU 28U 35U E8U)	39J6250	*
FR/CF (models A2F D2F E2F 13F 25F D2F B4F D6F E5F 1HF 28F 35F E8F)	39J6251	*
Simplified Chinese (models 1DC)	30R4777	*

8084 Windows XP Pro Recovery CDs	FRU#	CRU
US (Models 1GU 1AU A1U E1U 11U 12G 14U 21G 24U A3G B1G D3U D4G E3G 41U 15G 16G 18G 19G 1CG 1FU 22G 26G 27U 31U 31G 32G 72G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG B3U D5U E4U 1JU 29U 7GG 7HG 7JG E6G 33G 34U 51G 52G 53U 7KG 7NG 7PG 7QG D7U E9U 2AU 36U EBG 7RG 7SG 7TG)	39J6414	*
FR (models A1F E1F 12G 14F 21G A3G B1G D3F D4G E3G 15G 16G 18G 19G 1CG 22G 26G 27F 31G 32G 72G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG B3F D5F E4F 1JF 29F 7GG 7HG 7JG E6G 33G 34F 51G 52G 7KG 7NG 7PG 7QG E9F EBG 7RG 7SG 7TG)	39J6415	*
GR (models 12G 21G A3G B1G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG)	39J6416	*
SP/LA (models 12G 21G A3G B1G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 17S 23S D1S 1BS D4S EAS 37S)	39J6417	*



8084 Windows XP Pro Recovery CDs	FRU#	CRU
IT (models 12G 21G A3G B1G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG)	39J6418	*
SV (models 12G 21G A3G B1G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG)	39J6420	*
DK (models 12G 21G A3G B1G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG)	39J6421	*
FI (models 12G 21G A3G B1G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG)	39J6422	*
NO (models 12G 21G A3G B1G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG)	39J6423	*
NL (models 12G 21G A3G B1G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG)	39J6424	*
HE (models 12G 21G A3G B1G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG)	39J6425	*
PL (models 12G 21G A3G B1G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG)	39J6426	*
CZ (models 12G 21G A3G B1G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG)	39J6427	*
AE (models 12G 21G A3G B1G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG)	39J6428	*
RU (models 12G 21G A3G B1G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG)	41D1950	*
RE (models 12G 21G A3G B1G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG)	41D1949	*
TR (models 12G 21G A3G B1G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG)	39J6430	*
HU (models 12G 21G A3G B1G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG)	39J6431	*
PO (models 12G 21G A3G B1G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG)	39J6432	*
GK (models 12G 21G A3G B1G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG)	39J6433	*
SL (models 12G 21G A3G B1G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG)	39J6434	*

8084 Windows XP Pro Recovery CDs	FRU#	CRU
JP (models A4J)	30R4834	*
CS (models 1EC)	30R4813	*
Multilingual 1 (models 12G 21G A3G B1G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG)	39J7221	*
Multilingual 2 (models 12G 21G A3G B1G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG)	39J7222	*

8084 Keyboards (Standard PS/2 Black)	FRU#	CRU
US English (models 1AU A1U A2U D2U E1U E2U 11U 12G 13U 14U 21G 24U 25U A3G B1G B2G D2U D3U D4G E3G 41U 15G 16G 18G 19G 1CG 1DC 1EC 1FU 22G 26G 27U 31U 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 1GU B3U B4U D5U D6U E4U E5U 1HU 1JU 28U 29U 7GG 7HG 7JG E6G 33G 34U 35U 51G 52G 53U 7KG 7NG 7PG 7QG D7U E8U E9U 2AU 36U EBG 7RG 7SG 7TG 7UG 7VG)	89P8300	*
Arabic (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8301	*
Belgian/French (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8302	*
Belgian/UK (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8303	*
Bulgarian (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8305	*
Chinese/US (models 21G)	89P8306	*
Czech (mmodels 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8307	*
Danish (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8308	*
Dutch (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8309	*
French (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8310	*
French Canadian (models A1F A2F D2F E1F E2F 14F 25F D2F D3F 27F B3F B4F D5F D6F E4F E5F 1HF 1JF 28F 29F 34F 35F E8F E9F)	89P8311	*
French Canadian (models A1F A2F D2F E1F E2F 14F 25F D2F D3F 27F B3F B4F D5F D6F E4F E5F 1HF 1JF 28F 29F 34F 35F E8F E9F)	89P8312	*
German (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8313	*
Greek (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8314	*

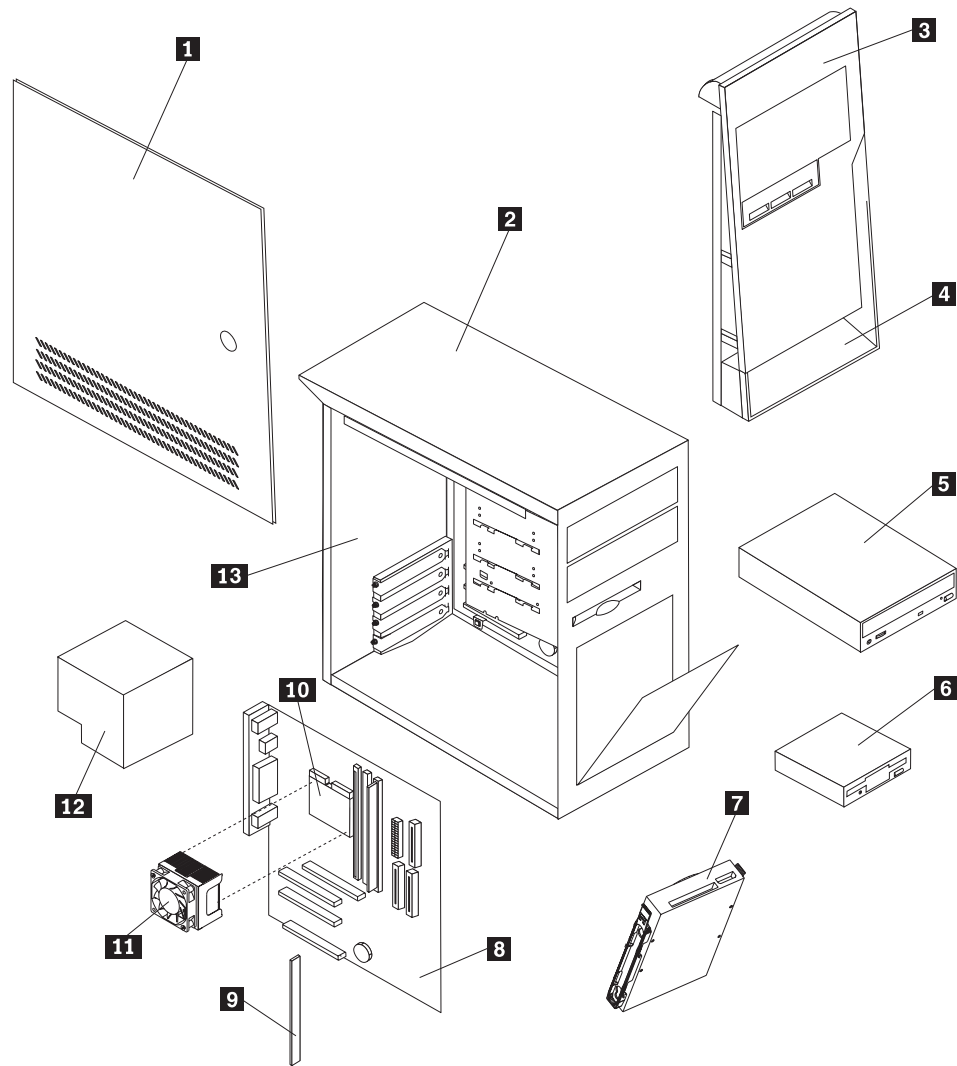


8084 Keyboards (Standard PS/2 Black)	FRU#	CRU
Hebrew (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8315	*
Hungarian (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8316	*
Iceland (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8317	*
Italian 141 (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8318	*
Italian 142 (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8319	*
Japanese (models A4J)	89P8320	*
LA Spanish (models 17S 23S D1S 1BS B2S D4S EAS 37S)	89P8322	*
Norwegian (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8323	*
Polish (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8324	*
Portuguese (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8325	*
Romanian (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8326	*
Russian/Cy (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8327	*
Russian/Cy (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8328	*
Serbian/Cyrillic (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8329	*
Slovak (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8330	*
Spanish (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8331	*
Swedish/Finn (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8332	*
Swiss F/G (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8333	*

8084 Keyboards (Standard PS/2 Black)	FRU#	CRU
Turkish (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8335	*
Turkish (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8336	*
UK English (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8337	*
US International (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8338	*
Yugoslav/Latin (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	89P8339	*

8084 Power Cords	FRU#	CRU
Power Cord (models 17S 23S D1S 1BS 1AU A1U A1F A2U A2F D2U D2F E1U E1F E2U E2F 11U 12G 13U 13F 14U 14F 21G 24U 25U 25F A3G B1G B2G D2U D2F D3U D3F D4G E3G 41U 15G 16G 18G 19G 1CG 1FU 22G 26G 27U 27F 31U 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG C1U C2U C3U C4U C5U C6U C7U 1GU B2S B3U B3F B4U B4F D4S D5U D5F D6U D6F E4U E4F E5U E5F 1HU 1HF 1JU 1JF 28U 28F 29U 29F 7GG 7HG 7JG E6G 33G 34U 34F 35U 35F 51G 52G 53U 7KG 7NG 7PG 7QG C8U D7U E8U E8F E9U E9F EAS 2AU 36U 37S EBG 7RG 7SG 7TG 7UG 7VG)	6952301	*
Power Cord (EMEA, ANZ, ASEAN Eng, Korea) (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	13F9978	*
Power Cord (EMEA, ANZ, ASEAN Eng, HK Eng) (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	14F0032	*
Power Cord (EMEA) (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	13F9996	*
Power Cord (EMEA, LA) (models 17S 23S D1S 1BS 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG B2S D4S 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EAS 37S EBG 7RG 7SG 7TG 7UG 7VG)	14F0068	*
Power Cord (Japan) (models A4J)	1838576	*
Power Cord (China, HK) (models 1DC 1EC)	02K0545	*
Power Cord (EMEA) (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	14F0086	*
Power Cord (EMEA, ANZ, ASEAN Eng) (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	14F0014	*
Power Cord (EMEA) (models 21G A3G B1G B2G D4G E3G 15G 16G 18G 19G 1CG 22G 26G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG 7GG 7HG 7JG E6G 33G 51G 52G 7KG 7NG 7PG 7QG EBG 7RG 7SG 7TG 7UG 7VG)	14F0050	*

# Machine Type 8085



Item #	8085 FRUs	FRU#	CRU
<b>1</b>	Side cover assembly (all models)	59P8547	**
<b>2</b>	"L" Cover assembly (all models)	59P8546	**
<b>3</b>	Front Bezel assembly (all models)	59P8544	**
<b>4</b>	Bezel trim/label kit (all models)	49P1900	**
<b>5</b>	CD-ROM Drive 48X (Black) - w/o volume ctrl and headphone jack (models A1U 15U 15F 15G 33U 33F D2U 41U 11U 13G 19U 21U 21F 21G 35G A4U A5S A5D A5Y B1U B2S B2D B2Y 7DG 1DU 1DF 51U 51F 51G A6J A7J A8J B4J B5J B6J 1GJ 2BJ E5J E6J E7J E9J EAJ EBJ)	71P7367	*
<b>5</b>	CD-ROM Drive 48X (Black) - w/o volume ctrl and headphone jack (models A1U 15U 15F 15G 33U 33F D2U 41U 11U 13G 19U 21U 21F 21G 35G A4U A5S A5D A5Y B1U B2S B2D B2Y 7DG 1DU 1DF 51U 51F 51G A6J A7J A8J B4J B5J B6J 1GJ 2BJ E5J E6J E7J E9J EAJ EBJ)	71P7385	*
<b>5</b>	CD-ROM Drive 48X (Black) - w/o volume ctrl and headphone jack (models A1U 15U 15F 15G 33U 33F D2U 41U 11U 13G 19U 21U 21F 21G 35G A4U A5S A5D A5Y B1U B2S B2D B2Y 7DG 1DU 1DF 51U 51F 51G A6J A7J A8J B4J B5J B6J 1GJ 2BJ E5J E6J E7J E9J EAJ EBJ)	71P7375	*

Item #	8085 FRUs	FRU#	CRU
5	CD-ROM Drive 48X (Black) - w/o volume ctrl and headphone jack (models A1U 15U 15F 15G 33U 33F D2U 41U 11U 13G 19U 21U 21F 21G 35G A4U A5S A5D A5Y B1U B2S B2D B2Y 7DG 1DU 1DF 51U 51F 51G A6J A7J A8J B4J B5J B6J 1GJ 2BJ E5J E6J E7J E9J EAJ EBJ)	71P7371	*
5	DVD-ROM 16X/48X (Black) (models 34S 34D 34Y 32U D3U 16G 1AU 1AS 1AD 1AY 22G 36G 71G 72G 75G 78G 79G 7AG D5U 28U 52G 7EG 7FG)	71P7357	*
5	DVD-ROM 16X/48X (Black) (models 34S 34D 34Y 32U D3U 16G 1AU 1AS 1AD 1AY 22G 36G 71G 72G 75G 78G 79G 7AG D5U 28U 52G 7EG 7FG)	26K5385	*
5	DVD-ROM 16X/48X (Black) (models 34S 34D 34Y 32U D3U 16G 1AU 1AS 1AD 1AY 22G 36G 71G 72G 75G 78G 79G 7AG D5U 28U 52G 7EG 7FG)	26K5435	*
5	CD-RW Drive (48X/32X/48X) (models A2S A2D A2Y D1S D1D D1Y E3S E3D E3Y 14S 14D 14Y 23U A3U D3U D4S D4D D4Y 42U 42S 42D 42Y 18U 1AU 1AS 1AD 1AY D5U B3U 1CU 37U 28U E8S)	71P7347	*
5	CD-RW Drive (48X/32X/48X) (models A2S A2D A2Y D1S D1D D1Y E3S E3D E3Y 14S 14D 14Y 23U A3U D3U D4S D4D D4Y 42U 42S 42D 42Y 18U 1AU 1AS 1AD 1AY D5U B3U 1CU 37U 28U E8S)	71P7349	*
5	48X Combo drive (models 17S 17D 17Y 24S 24D 24Y 27S 27D 27Y 24U 31U E1U 1BU 73G 74G 76G 77G 7BG 7CG E4G 53U 7GG 7HG 1EJ 1FJ 29J 2AJ 1HJ 38S)	26K5379	*
5	48X Combo drive (models 17S 17D 17Y 24S 24D 24Y 27S 27D 27Y 24U 31U E1U 1BU 73G 74G 76G 77G 7BG 7CG E4G 53U 7GG 7HG 1EJ 1FJ 29J 2AJ 1HJ 38S)	26K5381	*
5	Rambo IV (Black) (models 34S 34D 34Y 32U)	26K5383	*
6	Diskette drive, 3.5 1.44MB (models 34S 34D 34Y A2S A2D A2Y D1S D1D D1Y E3S E3D E3Y 14S 14D 14Y 17S 17D 17Y 24S 24D 24Y 27S 27D 27Y 15U 15F 15G 23U 24U 31U 32U 33U 33F A3U D3U D4S D4D D4Y E1U 42U 42S 42D 42Y 13G 16G 18U 1AU 1AS 1AD 1AY 1BU 21U 21F 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG A5S A5D A5Y B2S B2D B2Y D5U 7DG B3U E4G 1CU 1DU 1DF 28U 37U 51U 51F 51G 52G 53U 7EG 7FG 7GG 7HG A6J A7J A8J B4J B5J B6J 1EJ 1FJ 1GJ 29J 2AJ 2BJ E5J E6J E7J 1HJ E8S 38S E9J EAJ EBJ)	76H4091	*
6	Diskette drive, 3.5 1.44MB (optional to 76H4091) (models 34S 34D 34Y A2S A2D A2Y D1S D1D D1Y E3S E3D E3Y 14S 14D 14Y 17S 17D 17Y 24S 24D 24Y 27S 27D 27Y 15U 15F 15G 23U 24U 31U 32U 33U 33F A3U D3U D4S D4D D4Y E1U 42U 42S 42D 42Y 13G 16G 18U 1AU 1AS 1AD 1AY 1BU 21U 21F 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG A5S A5D A5Y B2S B2D B2Y D5U 7DG B3U E4G 1CU 1DU 1DF 28U 37U 51U 51F 51G 52G 53U 7EG 7FG 7GG 7HG A6J A7J A8J B4J B5J B6J 1EJ 1FJ 1GJ 29J 2AJ 2BJ E5J E6J E7J 1HJ E8S 38S E9J EAJ EBJ)	33P3343	*
7	Hard disk drive, 40GB EIDE (models A1U 15U 15F 15G 23U 33U 33F A3U D2U D3U E1U 41U 42U 42S 42D 42Y 11U 13G 18U 19U 1AU 1AS 1AD 1AY 21U 21F 21G 35G 71G 75G 79G A4U A5S A5D A5Y B1U B2S B2D B2Y D5U 7DG B3U E4G 1CU 1DU 1DF 28U 37U 51U 51F 51G 7EG A6J A7J A8J B4J B5J B6J 1GJ 2BJ E5J E6J E7J E9J EAJ EBJ)	40Y8757	*
7	Hard disk drive, 80GB EIDE (models 34S 34D 34Y A2S A2D A2Y D1S D1D D1Y E3S E3D E3Y 14S 14D 14Y 17S 17D 17Y 24U 24F 24S 24D 24Y 27S 27D 27Y 31U D4S D4D D4Y 16G 1BU 22G 36G 72G 78G 7AG 52G 53U 7FG 1EJ 1FJ 29J 2AJ 1HJ E8S 38S)	40Y8758	*
7	Hard disk drive, 120GB EIDE (models 32U)	40Y8759	*
7	Hard disk drive, 80GB S-ATA (models 74G 77G 7CG 7HG)	71P7293	*
7	Hard disk drive, 80GB S-ATA (models 74G 77G 7CG 7HG)	40Y8761	*
7	Hard disk drive, 160GB S-ATA (models 73G 76G 7BG 7GG)	71P7297	*
7	Hard disk drive, 160GB S-ATA (models 73G 76G 7BG 7GG)	40Y8762	*
7	Hard disk drive, 160GB S-ATA (models 73G 76G 7BG 7GG)	40Y9035	*

Item #	8085 FRUs	FRU#	CRU
8	System board, 10/100 E-net (models 34S 34D 34Y 14S 14D 14Y 17S 17D 17Y 24S 24D 24Y 27S 27D 27Y 15U 15F 15G 23U 24U 31U 32U 33U 33F 13G 16G 18U 21U 21F 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG C4U C5U C6U C7U 7DG 1DU 1DF 28U 37U 51U 51F 51G 52G 53U 7EG 7FG 7GG 7HG CDU 1FJ 1GJ 1EJ 29J 2AJ 2BJ 1HJ 38S)	19R0703	**
8	System board, (10/100 Enet) w/ video buffer -- optional to 19R0703 (models 34S 34D 34Y 14S 14D 14Y 17S 17D 17Y 24S 24D 24Y 27S 27D 27Y 15U 15F 15G 23U 24U 31U 32U 33U 33F 13G 16G 18U 21U 21F 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG C4U C5U C6U C7U 7DG 1DU 1DF 28U 37U 51U 51F 51G 52G 53U 7EG 7FG 7GG 7HG CDU 1FJ 1GJ 1EJ 29J 2AJ 2BJ 1HJ 38S)	39J7965	**
8	System board, (10/100 Enet) w/ video buffer -- optional to 19R0703 (models 34S 34D 34Y 14S 14D 14Y 17S 17D 17Y 24S 24D 24Y 27S 27D 27Y 15U 15F 15G 23U 24U 31U 32U 33U 33F 13G 16G 18U 21U 21F 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG C4U C5U C6U C7U 7DG 1DU 1DF 28U 37U 51U 51F 51G 52G 53U 7EG 7FG 7GG 7HG CDU 1FJ 1GJ 1EJ 29J 2AJ 2BJ 1HJ 38S)	41D0948	**
8	System board, 10/100 E-net, no AGP (models A2S A2D A2Y D1S D1D D1Y E3S E3D E3Y A1U A3U D2U D3U D4S D4D D4Y E1U 41U 42U 42S 42D 42Y 11U 19U 1AU 1AS 1AD 1AY 1BU C1U C2U C3U A4U A5S A5D A5Y B1U B2S B2D B2Y D5U C8U C9U CAU B3U E4G 1CU CBU A7J A8J A6J B4J B5J B6J E5J E6J E7J E8S E9J EAJ EBJ)	19R0837	**
8	System board, (10/100 Enet) w/ video buffer, no AGP -- optional to 19R0837(models A2S A2D A2Y D1S D1D D1Y E3S E3D E3Y A1U A3U D2U D3U D4S D4D D4Y E1U 41U 42U 42S 42D 42Y 11U 19U 1AU 1AS 1AD 1AY 1BU C1U C2U C3U A4U A5S A5D A5Y B1U B2S B2D B2Y D5U C8U C9U CAU B3U E4G 1CU CBU A7J A8J A6J B4J B5J B6J E5J E6J E7J E8S E9J EAJ EBJ)	39J7966	**
8	System board, (10/100 Enet) w/ video buffer, no AGP -- optional to 19R0837(models A2S A2D A2Y D1S D1D D1Y E3S E3D E3Y A1U A3U D2U D3U D4S D4D D4Y E1U 41U 42U 42S 42D 42Y 11U 19U 1AU 1AS 1AD 1AY 1BU C1U C2U C3U A4U A5S A5D A5Y B1U B2S B2D B2Y D5U C8U C9U CAU B3U E4G 1CU CBU A7J A8J A6J B4J B5J B6J E5J E6J E7J E8S E9J EAJ EBJ)	41D0949	**
9	128 MB SDRAM PC2700 (models A2S A2D A2Y D1S D1D D1Y A1U D2U 41U 11U 19U A4U A5S A5D A5Y B1U A8J B5J E7J EBJ)	31P9120	*
9	256 MB SDRAM PC2700 (models E3S E3D E3Y 14S 14D 14Y 27S 27D 27Y A3U D3U D4S D4D D4Y E1U 42U 42S 42D 42Y 1AU 1AS 1AD 1AY 1BU B2S B2D B2Y D5U 7DG B3U E4G 1CU 1DU 1DF A6J A7J B4J B6J E5J E6J E8S E9J EAJ)	31P9121	*
9	512 MB SDRAM PC2700 (models 1EJ 1FJ 1GJ 1HJ)	31P9122	*
9	256 MB SDRAM PC3200 (models 34S 34D 34Y 17S 17D 17Y 24S 24D 24Y 15U 15F 15G 23U 24U 31U 32U 33U 33F 13G 16G 18U 21U 21F 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 28U 37U 51U 51F 51G 52G 53U 7EG 7FG 7GG 7HG 38S)	73P2683	*
9	512 MB SDRAM PC3200 (models 29J 2AJ 2BJ)	73P2684	*
10	Intel Celeron 2.4 GHz (models A2S A2D A2Y A1U A3U C1U)	88P7699	**
10	Intel Celeron 2.6 GHz (models D1S D1D D1Y D2U D3U C2U)	13R8907	**
10	Intel Celeron 2.8 GHz (models E3S E3D E3Y)	13R8963	**
10	Intel Celeron 2.4 GHz (models A4U A5S A5D A5Y C8U A6J A7J A8J)	19R0780	**
10	Intel Celeron 2.53 GHz (models B1U B2S B2D B2Y C9U B3U B4J B5J B6J)	19R0417	**
10	Intel Celeron 2.66 GHz (models D4S D4D D4Y D5U CAU)	19R0419	**
10	Intel Celeron 2.8 GHz (models E1U C3U E5J E6J E7J)	19R0421	**
10	Intel Celeron 2.93 GHz (models E4G CBU E9J EAJ EBJ)	29R6989	**
10	Intel Celeron 3.06 GHz (models E8S)	29R6990	**

Item #	8085 FRUs	FRU#	CRU
10	Intel P4 2.6 GHz (models 41U 42U 42S 42D 42Y)	73P0574	**
10	Intel P4 2.8 GHz (models 19U 1AU 1AS 1AD 1AY)	19R2302	**
10	Intel P4 2.8 GHz (models 11U C4U)	74P1631	**
10	Intel P4 3.06 GHz (models 27S 27D 27Y)	74P1633	**
10	Intel P4 2.8 GHz (models 14S 14D 14Y 13G 1BU 7DG 1CU 1DU 1DF 1EJ 1FJ 1GJ 1HJ)	19R0423	**
10	Intel P4 2.8 GHz (models 17S 17D 17Y 15U 15F 15G 16G 18U 71G 72G 73G 74G C5U)	19R0292	**
10	Intel P4 3.0 GHz (models 24S 24D 24Y 23U 24U 21U 21F 75G 76G 77G 78G C6U 28U 29J 2AJ 2BJ)	19R0294	**
10	Intel P4 3.2 GHz (models 34S 34D 34Y 31U 32U 33U 33F 35G 36G 79G 7AG 7BG 7CG C7U 37U 38S)	19R0296	**
10	Intel P4 3.4 GHz (models 51U 51F 51G 52G 53U 7EG 7FG 7GG 7HG CDU)	29R6991	**
11	Heat sink and fan, Northwood <3.0 GHZ (models A2S A2D A2Y A1U A3U C1U D1S D1D D1Y D2U D3U C2U E3S E3D E3Y 41U 42U 42S 42D 42Y 19U 1AU 1AS 1AD 1AY 11U C4U)	32P4004	**
11	Heat sink and fan, Northwood >=3.0 GHZ and all Prescott (models 34S 34D 34Y 17S 17D 17Y 24S 24D 24Y 15U 15F 15G 23U 24U 31U 32U 33U 33F 13G 1BU 16G 18U 71G 72G 73G 74G C5U 21U 21F 75G 76G 77G 78G C6U 35G 36G 79G 7AG 7BG 7CG C7U D4S D4D D4Y E1U C3U A4U A5S A5D A5Y C8U B1U B2S B2D B2Y C9U D5U CAU 7DG B3U 1CU 1DU 1DF 28U 37U 51U 51F 51G 52G 53U 7EG 7FG 7GG 7HG CDU 27S 27D 27Y A6J A7J A8J B4J B5J B6J 1EJ 1FJ 1GJ 29J 2AJ 2BJ E5J E6J E7J 1HJ E8S 38S E9J EAJ EBJ)	13R9195	**
11	Heat sink and fan, Northwood >=3.0 GHZ and all Prescott, Dual Heat Pipe -- optional to 13R9195 (models 34S 34D 34Y 17S 17D 17Y 24S 24D 24Y 15U 15F 15G 23U 24U 31U 32U 33U 33F 13G 1BU 16G 18U 71G 72G 73G 74G C5U 21U 21F 75G 76G 77G 78G C6U 35G 36G 79G 7AG 7BG 7CG C7U D4S D4D D4Y E1U C3U A4U A5S A5D A5Y C8U B1U B2S B2D B2Y C9U D5U CAU 7DG B3U 1CU 1DU 1DF 28U 37U 51U 51F 51G 52G 53U 7EG 7FG 7GG 7HG CDU 27S 27D 27Y A6J A7J A8J B4J B5J B6J 1EJ 1FJ 1GJ 29J 2AJ 2BJ E5J E6J E7J 1HJ E8S 38S E9J EAJ EBJ)	13N2951	**
12	Power supply, AcBel PFC, 230W (models A1U 15U 15F 15G 23U 24U 31U 32U 33U 33F A3U D2U D3U E1U 41U 42U 11U 13G 16G 18U 19U 1AU 1BU 21U 21F 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG C1U C2U C3U C4U C5U C6U C7U A4U B1U D5U 7DG C8U C9U CAU B3U E4G 1CU 1DU 1DF 28U 37U 51U 51F 51G 52G 53U 7EG 7FG 7GG 7HG CBU CDU ADD A6J A7J A8J B4J B5J B6J 1EJ 1FJ 1GJ 29J 2AJ 2BJ E5J E6J E7J 1HJ E9J EAJ EBJ)	74P4300	N
12	Power supply, AcBel China, 230W (models 34S 34D 34Y A2S A2D A2Y D1S D1D D1Y E3S E3D E3Y 14S 14D 14Y 17S 17D 17Y 24S 24D 24Y 27S 27D 27Y D4S D4D D4Y 42S 42D 42Y 1AS 1AD 1AY A5S A5D A5Y B2S B2D B2Y E8S 38S)	74P4301	N
13	Chassis assembly (all models)	59P8542	**

The FRUs listed in the following tables are not illustrated.

8085 FRUs	FRU#	CRU
Front bezel release kit (all models)	25P0069	**
Retainer, Adapter Cards (all models)	59P8564	**
Cable, audio (all models)	75H9219	**
5.25 EMC shield (all models)	19K5548	**
Rubber foot (all models)	03K9655	**



8085 FRUs	FRU#	CRU
PCMCIA Asm (all models)	59P8587	**
1394 (6-pin) Cable (models 73G 76G 7BG)	25P0084	**
Universal adapter bracket (all models)	32P4743	**
Bezel blanks kit (all models)	25P0068	**
80 mm fan assembly (models with 3.06 GHz microprocessor or greater)	22P4447	**
2 audio front panel (models 34S 34D 34Y 24U 24S 24D 24Y 31U 32U A2S A2D A2Y D1S D1D D1Y D4S D4D D4Y E3S E3D E3Y 14S 14D 14Y 17S 17D 17Y 74G 77G 7CG A5S A5D A5Y B2S B2D B2Y 7DG 7GG 7HG 29J 2AJ 2BJ E8S 38S)	49P1750	**
2 Audio w/1394 Fr Pnl (models 73G 76G 7BG)	49P1752	**
Cable, audio assembly (all models)	49P1933	**
Cable, dual USB 2.0 (all models)	49P4365	**
Cable, SATA (all models)	03R0293	**
Hard disk drive bracket assembly (all models)	59P8543	**
Hard disk drive tray (all models)	59P8549	**
Power switch assembly (all models)	59P8545	**
Bezel, Diskette drive (all models)	59P8548	**
90 deg, 6-pin, 1394 cable (models 73G 76G 7BG 7GG)	59P8561	**
Cable, 2 drop (close spacing) ATA 66/100 w/pull tabs (all models)	59P8571	*
Cable, 2 drop** (large spacing) ATA 66/100 w/pull tabs (all models)	59P8572	*
Cable, Diskette drive (all models)	59P8568	*
Cable clip (all models)	59P8584	*
Battery, 3.0 V (all models)	33F8354	*
Mouse, 2 button, black (models A1U D2U 41U 11U 19U)	24P0383	*
Mouse, optical wheel (models 34S 34D 34Y A2S A2D A2Y D1S D1D D1Y E3S E3D E3Y 14S 14D 14Y 17S 17D 17Y 24S 24D 24Y 27S 27D 27Y 15U 15F 15G 23U 24U 31U 32U 33U 33F A3U D3U D4S D4D D4Y E1U 42U 42S 42D 42Y 13G 16G 18U 1AU 1AS 1AD 1AY 1BU 21U 21F 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG A4U A5S A5D A5Y B1U B2S B2D B2Y D5U 7DG B3U E4G 1CU 1DU 1DF 28U 37U 51U 51F 51G 52G 53U 7EG 7FG 7GG 7HG A6J A7J A8J B4J B5J B6J 1EJ 1FJ 1GJ 29J 2AJ 2BJ E5J E6J E7J 1HJ E8S 38S E9J EAJ EBJ)	89P5089	*
Speakers, Infinity Active T1 (Black) (models 34S 34D 34Y A2S A2D A2Y D1S D1D D1Y E3S E3D E3Y 14S 14D 14Y 17S 17D 17Y 24S 24D 24Y 27S 27D 27Y 23U 24U 31U 32U A3U D3U D4S D4D D4Y E1U 42U 42S 42D 42Y 18U 1AU 1AS 1AD 1AY 1BU 73G 76G 7BG A5S A5D A5Y B2S B2D B2Y D5U B3U E4G 1CU 28U 37U 53U 7GG E8S 38S)	25P4726	*
Speaker Power brick - US, CE, CF, LA, Taiwan (models 34S 34D 34Y A2S A2D A2Y D1S D1D D1Y E3S E3D E3Y 14S 14D 14Y 17S 17D 17Y 24S 24D 24Y 27S 27D 27Y 23U 24U 31U 32U A3U D3U D4S D4D D4Y E1U 42U 42S 42D 42Y 18U 1AU 1AS 1AD 1AY 1BU A5S A5D A5Y B2S B2D B2Y D5U B3U 28U 37U 53U E8S 38S)	10K2587	*
Speaker Power brick - Europe (non-UK) (models 73G 76G 7BG E4G 7GG)	25P5704	*
Speaker Power brick - UK, Hong Kong (3 prong) (models 73G 76G 7BG E4G 7GG)	25P5703	*
Speaker Power brick - Argentina (models 34S 34Y A2S A2Y D1S D1Y E3S E3Y 14S 14Y 17S 17Y 24S 24Y 27S 27Y D4S D4Y 42S 42Y 1AS 1AY A5S A5Y B2S B2Y E8S 38S)	01R2253	*
System board EMC shield kit (all models)	89P4761	**
Retention kit (all models)	89P6740	**
Heatsink grease, Heat pipe (all models)	13R9195	**

8085 FRUs	FRU#	CRU
Misc. hardware kit (all models)	09N5764	**
Soft modem V.92/V.44 (models 34S 34D 34Y A2S A2D A2Y D1S D1D D1Y E3S E3D E3Y 14S 14D 14Y 17S 17D 17Y 24S 24D 24Y 27S 27D 27Y 23U 24U 31U 32U A3U D3U D4S D4D D4Y E1U 42U 42S 42D 42Y 18U 1AU 1AS 1AD 1AY 1BU 73G 76G 7BG A5S A5D A5Y B2S B2D B2Y D5U B3U E4G 1CU 28U 37U 53U 7GG E8S 38S)	22P7943	*
64MB, Nvidia GeForce MX 440 (VGA) ATX (models 34S 34D 34Y 24S 24D 24Y 24U 31U 32U)	73P0715	*
64MB NVidia Quadro4 200NVS (LP/ATX) (models 73G 76G 7BG 7GG)	25P6684	*
1394 Firewire PCI LP (ATX) (models 73G 76G 7BG)	73P2608	*
1394 Firewire PCI LP (ATX) (models 73G 76G 7BG)	73P2609	*
RJ11 connector adapter (Spain, Ireland) (All "G" models)	60H6043	*
RJ11 connector adapter (Austria) (All "G" models)	60H6045	*
RJ11 connector adapter (Belgium) (All "G" models)	60H6046	*
RJ11 connector adapter (Denmark) (All "G" models)	60H6047	*
RJ11 connector adapter (Norway, Finland) (All "G" models)	60H6048	*
RJ11 connector adapter (France) (All "G" models)	60H6049	*
RJ11 connector adapter (Germany) (All "G" models)	60H6050	*
RJ11 connector adapter (UK, NZ, HK) (All "G", "M", "B", "H" models)	60H6051	*
RJ11 connector adapter (Italy) (All "G" models)	60H6052	*
RJ11 connector adapter (Netherlands) (All "G" models)	60H6053	*
RJ11 connector adapter (Sweden) (All "G" models)	60H6054	*
RJ11 connector adapter (Switzerland) (All "G" models)	60H6055	*

8085 Windows XP Home Recovery CDs	FRU#	CRU
US (models A1U 23U 24U 31U 32U A3U D2U D3U E1U 41U 42U 11U 18U 19U 1AU 1BU A4U B1U D5U B3U E4G 1CU 28U 37U 53U)	39J6250	*
FR (models E4G)	39J6251	*
GR (models E4G)	39J6252	*
SP/LA (models 34S 34D 34Y A2S A2D A2Y D1S D1D D1Y E3S E3D E3Y 14S 14D 14Y 17S 17D 17Y 24S 24D 24Y 27S 27D 27Y D4S D4D D4Y 42S 42D 42Y 1AS 1AD 1AY A5S A5D A5Y B2S B2D B2Y E4G E8S 38S)	39J6253	*
IT (models E4G)	39J6254	*
DK (models E4G)	39J6257	*
NL (models E4G)	39J6260	*
AE (models E4G)	39J6264	*
SV (models E4G)	39J6256	*
HE (models E4G)	39J6261	*
FI (models E4G)	39J6258	*
NO (models E4G)	39J6259	*
PL (models E4G)	39J6262	*
PO (models E4G)	39J6268	*
RU (models E4G)	41D1948	*
RE (models E4G)	41D1947	*



8085 Windows XP Home Recovery CDs	FRU#	CRU
HU (models E4G)	39J6267	*
CZ (models E4G)	39J6263	*
TR (models E4G)	39J6266	*
GK (models E4G)	39J6269	*
JP (models A7J A8J B5J B6J 1FJ 1GJ 2AJ 2BJ E6J E7J 1HJ E9J EAJ EBJ)	30R4798	*

8085 Windows XP Pro Recovery CDs	FRU#	CRU
US (Models 15U 15G 33U 13G 16G 21U 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 1DU 51U 51G 52G 7EG 7FG 7GG 7HG)	39J6414	*
FR (models 15F 15G 33F 13G 16G 21F 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 1DF 51F 51G 52G 7EG 7FG 7GG 7HG)	39J6415	*
GR (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 51G 52G 7EG 7FG 7GG 7HG)	39J6416	*
IT (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 51G 52G 7EG 7FG 7GG 7HG)	39J6418	*
SP (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 51G 52G 7EG 7FG 7GG 7HG)	39J6417	*
DK (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 51G 52G 7EG 7FG 7GG 7HG)	39J6421	*
NL (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 51G 52G 7EG 7FG 7GG 7HG)	39J6424	*
AE (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 51G 52G 7EG 7FG 7GG 7HG)	39J6428	*
SV (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 51G 52G 7EG 7FG 7GG 7HG)	39J6420	*
HE (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 51G 52G 7EG 7FG 7GG 7HG)	39J6425	*
FI (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 51G 52G 7EG 7FG 7GG 7HG)	39J6422	*
NO (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 51G 52G 7EG 7FG 7GG 7HG)	39J6423	*
PL (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 51G 52G 7EG 7FG 7GG 7HG)	39J6426	*
PO (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 51G 52G 7EG 7FG 7GG 7HG)	39J6432	*
RU (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 51G 52G 7EG 7FG 7GG 7HG)	41D1950	*
RE (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 51G 52G 7EG 7FG 7GG 7HG)	41D1949	*
HU (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 51G 52G 7EG 7FG 7GG 7HG)	39J6431	*
CZ (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 51G 52G 7EG 7FG 7GG 7HG)	39J6427	*
TR (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 51G 52G 7EG 7FG 7GG 7HG)	39J6430	*
GK (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 51G 52G 7EG 7FG 7GG 7HG)	39J6433	*

8085 Windows XP Pro Recovery CDs	FRU#	CRU
SL (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 51G 52G 7EG 7FG 7GG 7HG)	39J6434	*
JP (models A6J B4J 1EJ 29J E5J E9J)	30R4834	*
Multilingual 1 (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 51G 52G 7EG 7FG 7GG 7HG)	39J7221	*
Multilingual 2 (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 51G 52G 7EG 7FG 7GG 7HG)	39J7222	*

8085 Keyboard (Preferred Pro Fullsize, PS/2, Stealth Black)	FRU#	CRU
US English (models A1U 15U 15G 23U 24U 31U 33U A3U D2U D3U E1U 41U 42U 11U 13G 16G 18U 19U 1AU 1BU 21U 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG A4U B1U D5U 7DG B3U E4G 1CU 1DU 28U 37U 51U 51G 52G 53U 7EG 7FG 7GG 7HG)	89P8300	*
Arabic (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	89P8301	*
Belgian/French (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	89P8302	*
Belgian/UK (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	89P8303	*
Bulgarian (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	89P8305	*
Chinese/US (models 15G)	89P8306	*
Czech (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	89P8307	*
Danish (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	89P8308	*
Dutch (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	89P8309	*
French (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	89P8310	*
French Canadian (models 15F 33F 21F 1DF 51F)	89P8311	*
French Canadian (models 15F 33F 21F 1DF 51F)	89P8312	*
German (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	89P8313	*
Greek (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	89P8314	*
Hebrew (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	89P8315	*
Hungarian (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	89P8316	*
Iceland (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	89P8317	*
Italian 141 (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	89P8318	*
Italian 142 (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	89P8319	*

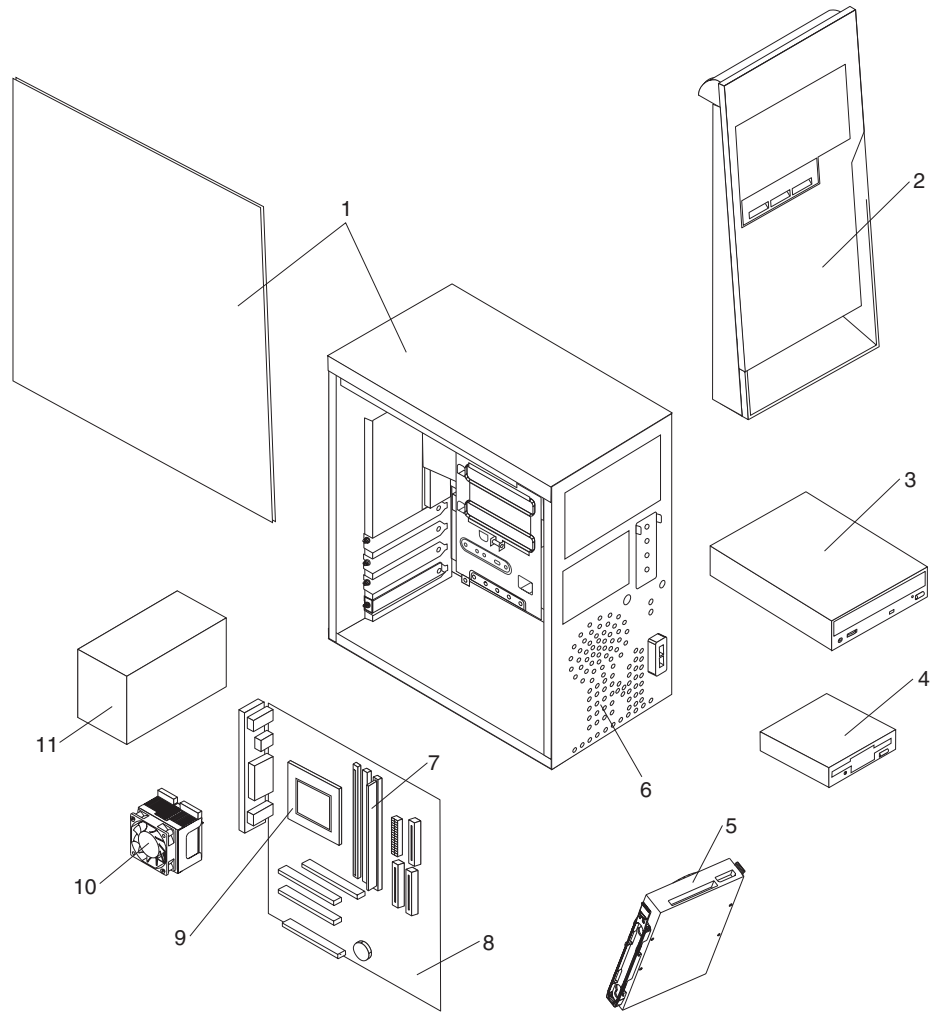
<b>8085 Keyboard (Preferred Pro Fullsize, PS/2, Stealth Black)</b>	<b>FRU#</b>	<b>CRU</b>
Japan (models A6J A7J A8J B4J B5J B6J 1EJ 1FJ 1GJ 29J 2AJ 2BJ E5J E6J E7J 1HJ E9J EAJ EBJ)	89P8320	*
LA Spanish (models 34S 34D 34Y A2S A2D A2Y D1S D1D D1Y E3S E3D E3Y 14S 14D 14Y 17S 17D 17Y 24S 24D 24Y 27S 27D 27Y D4S D4D D4Y 42S 42D 42Y 1AS 1AD 1AY A5S A5D A5Y B2S B2D B2Y E8S 38S)	89P8322	*
Norwegian (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	89P8323	*
Polish (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	89P8324	*
Portuguese (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	89P8325	*
Romanian (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	89P8326	*
Russian/Cy (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	89P8327	*
Russian/Cy (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	89P8328	*
Serbian/Cyrillic (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	89P8329	*
Slovak (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	89P8330	*
Spanish (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	89P8331	*
Swedish/Finn (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	89P8332	*
Swiss F/G (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	89P8333	*
Turkish (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	89P8335	*
Turkish (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	89P8336	*
UK English (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	89P8337	*
US International (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG)	89P8338	*
Yugoslav/Latin (models 15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	89P8339	*

<b>8085 Productivity USB Keyboard</b>	<b>FRU#</b>	<b>CRU</b>
US (models 32U)	89P8800	*

<b>8085 Power Cords</b>	<b>FRU#</b>	<b>CRU</b>
Power Cord (models 34S 34D A2S A2D D1S D1D E3S E3D 14S 14D 17S 17D 24S 24D 27S 27D A1U 15U 15F 23U 24U 31U 32U 33U 33F A3U D2U D3U D4S D4D E1U 41U 42U 42S 42D 11U 13G 16G 18U 19U 1AU 1AS 1AD 1BU 21U 21F 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 79G 7AG 7BG 7CG C1U C2U C3U C4U C5U C6U C7U A4U A5S A5D B1U B2S B2D D5U 7DG C8U C9U CAU B3U E4G 1CU 1DU 1DF 28U 37U 51U 51F 51G 52G 53U 7EG 7FG 7GG 7HG CBU CDU E8S 38S)	6952301	*

8085 Power Cords	FRU#	CRU
Power Cord (EMEA, ANZ, ASEAN Eng, Korea) (models15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	13F9978	*
Power Cord (EMEA, ANZ, ASEAN Eng, HK Eng) (models15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	14F0032	*
Power Cord (EMEA) (models15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	13F9996	*
Power Cord (EMEA, LA) (models 34S 34D 34Y A2S A2D A2Y D1S D1D D1Y E3S E3D E3Y 14S 14D 14Y 17S 17D 17Y 24S 24D 24Y 27S 27D 27Y 15G D4S D4D D4Y 42S 42D 42Y 13G 16G 1AS 1AD 1AY 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG A5S A5D A5Y B2S B2D B2Y 7DG E4G 51G 52G 7EG 7FG 7GG 7HG E8S 38S)	14F0068	*
Power Cord (APU) (models 34Y A2Y D1Y E3Y 14Y 17Y 24Y 27Y D4Y 42Y 1AY A5Y B2Y)	36L8879	*
Power Cord (Japan) (models A6J A7J A8J B4J B5J B6J 1EJ 1FJ 1GJ 29J 2AJ 2BJ E9J EAJ EBJ)	1838576	*
Power Cord (EMEA) (models15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	14F0086	*
Power Cord (EMEA, ANZ, ASEAN Eng) (models15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	14F0014	*
Power Cord (EMEA) (models15G 13G 16G 21G 22G 35G 36G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG E4G 51G 52G 7EG 7FG 7GG 7HG)	14F0050	*

# Machine Type 8126



Item #	8126 FRUs	FRU#	CRU
1	Chassis assembly (all models)	74P2256	N
2	Bezel and shield kit (all models)	74P2257	*
3	CD-ROM Drive 48X - Black w/o jack & vol (models 41C 11C D3A D3Q D3T D4V E1A E1Q E1T E2A E2Q E2T 12V 13A 13Q 13T 21A 21Q 21T 31A 31Q 31T)	40Y8801	**
3	CD-ROM Drive 48X - Black w/o jack & vol (models 41C 11C D3A D3Q D3T D4V E1A E1Q E1T E2A E2Q E2T 12V 13A 13Q 13T 21A 21Q 21T 31A 31Q 31T)	40Y8805	**
3	CD-ROM Drive 48X - Black w/o jack & vol (models 41C 11C D3A D3Q D3T D4V E1A E1Q E1T E2A E2Q E2T 12V 13A 13Q 13T 21A 21Q 21T 31A 31Q 31T)	40Y8807	**
3	CD-ROM Drive 48X - Black w/o jack & vol (models 41C 11C D3A D3Q D3T D4V E1A E1Q E1T E2A E2Q E2T 12V 13A 13Q 13T 21A 21Q 21T 31A 31Q 31T)	40Y8813	**
3	CD-ROM Drive 48X - Black w/o jack & vol (models 41C 11C D3A D3Q D3T D4V E1A E1Q E1T E2A E2Q E2T 12V 13A 13Q 13T 21A 21Q 21T 31A 31Q 31T)	40Y8929	**

Item #	8126 FRUs	FRU#	CRU
4	Diskette drive, 3.5 1.44 MB (models D1C D2C A1C A2C D3A D3Q D3T D4V E1A E1Q E1T E2A E2Q E2T 12V 13A 13Q 13T 21A 21Q 21T 31A 31Q 31T)	40Y9107	**
4	Diskette drive, 3.5 1.44 MB (models D1C D2C A1C A2C D3A D3Q D3T D4V E1A E1Q E1T E2A E2Q E2T 12V 13A 13Q 13T 21A 21Q 21T 31A 31Q 31T)	40Y8899	**
4	Diskette drive, 3.5 1.44 MB (models D1C D2C A1C A2C D3A D3Q D3T D4V E1A E1Q E1T E2A E2Q E2T 12V 13A 13Q 13T 21A 21Q 21T 31A 31Q 31T)	40Y9105	**
5	Hard disk drive, 40 GB EIDE (models D1C D2C 41C 11C A1C A2C D3A D3Q D3T D4V E1A E1Q E1T E2A E2Q E2T 12V 13A 13Q 13T 21A 21Q 21T 31A 31Q 31T)	40Y8757	**
6	Speaker Asm. Soldered Terminals (all models)	00N5151	*
7	128 MB SDRAM PC2700 (models D1C D2C 41C 11C A1C A2C D3A D3Q D3T E1A E1Q E1T)	31P9120	*
7	256 MB SDRAM PC2700 (models D4V E2A E2Q E2T 12V 13A 13Q 13T)	31P9121	*
7	256 MB SDRAM PC32 (models 21A 21Q 21T 31A 31Q 31T)	73P2683	*
8	System board, 10/100 E-net, (models 12V 31A 31Q 31T)	19R0703	**
8	System board, (10/100 Enet) w/ video buffer -- optional to 19R0703 (models 12V 31A 31Q 31T)	39J7965	**
8	System board, (10/100 Enet) w/ video buffer -- optional to 19R0703 (models 12V 31A 31Q 31T)	41D0948	**
8	System board, 10/100 E-net, no AGP (models D1C D2C 41C 11C A1C A2C D3A D3Q D3T D4V E1A E1Q E1T E2A E2Q E2T 13A 13Q 13T 21A 21Q 21T)	19R0837	**
8	System board, (10/100 Enet) w/ video buffer, no AGP -- optional to 19R0837 (models D1C D2C 41C 11C A1C A2C D3A D3Q D3T D4V E1A E1Q E1T E2A E2Q E2T 13A 13Q 13T 21A 21Q 21T)	39J7966	**
8	System board, (10/100 Enet) w/ video buffer, no AGP -- optional to 19R0837 (models D1C D2C 41C 11C A1C A2C D3A D3Q D3T D4V E1A E1Q E1T E2A E2Q E2T 13A 13Q 13T 21A 21Q 21T)	41D0949	**
9	Intel P4 2.6 GHz (models 41C)	73P0574	**
9	Intel P4 2.8 GHz (models 11C 13A 13Q 13T)	19R2302	**
9	Intel Celeron 2.6 GHz (models D1C D2C)	13R8907	**
9	Intel Celeron 2.4 GHz (models A1C A2C)	19R0780	**
9	Intel Prescott Celeron 2.66 GHz (models D3A D3Q D3T D4V)	19R0419	**
9	Intel Prescott Celeron 2.93 GHz (models E1A E1Q E1T E2A E2Q E2T)	29R6989	**
9	Intel Prescott Celeron 3.06 GHz (models)	29R6990	**
9	Intel Prescott 3.0 GHz (models 21A 21Q 21T)	19R0294	**
9	Intel Prescott 3.2 GHz (models 31A 31Q 31T)	19R0296	**
10	Heat sink and fan, Northwood <3.0GHZ (models D1C D2C 41C 11C 13A 13Q 13T)	32P4004	*
10	Heat sink and fan, Northwood >=3.0 GHZ and all Prescott (models A1C A2C D3A D3Q D3T D4V 12V 21A 21Q 21T 31A 31Q 31T)	13R9195	*

Item #	8126 FRUs	FRU#	CRU
10	Heat sink and fan, Northwood >=3.0 GHZ and all Prescott, Dual Heat Pipe -- optional to 13R9195 (models A1C A2C D3A D3Q D3T D4V 12V 21A 21Q 21T 31A 31Q 31T)	13N2951	*
11	230W Power Supply (models D3A D3T E1A E1T E2A E2T 13A 13T 21A 21T 31A 31T)	74P4300	N
11	230W Power Supply - AcBel China version (models D1C D2C 41C 11C A1C A2C D3Q D4V E1Q E2Q 12V 13Q 21Q 31Q)	74P4301	N

The FRUs listed in the following table are not illustrated.

8126 FRUs	FRU#	CRU
Cable, Diskette drive (all models)	59P8568	**
Cable, audio (all models)	75H9219	**
Cable, IDE (ATA66 1 drop) (all models)	37L4525	**
Cable, IDE (ATA66 2 drop) (all models)	37L5098	**
Dual USB 1.1 cable (top channel) (all models)	89P8137	**
SPDIF Card assembly (all models)	49P1754	**
Audio cable assembly (ATA) (all models)	49P1933	**
Front panel label kit (all models)	09N6708	*
Access panel (all models)	49P3386	*
Cable, power/LED (all models)	09N6709	**
Screw kit (all models)	49P3387	*
Bracket, second hardfile mount & 6-32 screw (all models)	74P2254	**
Cable, serial ATA (all models)	88P5927	**
Planar shield (all models)	26K1216	**
System Fan (includes bracket) -- =>3.0GHz (models 21A 21Q 21T 31A 31Q 31T)	88P8585	**
Battery, 3.0 V (all models)	33F8354	**
Mouse, optical wheel (models D1C D2C 41C 11C A1C A2C D3A D3Q D3T D4V E1A E1Q E1T E2A E2Q E2T 12V 13A 13Q 13T 21A 21Q 21T 31A 31Q 31T)	89P5089	*
RJ11 connector adapter (Spain, Ireland) (All "G" models)	60H6043	*
RJ11 connector adapter (Austria) (All "G" models)	60H6045	*
RJ11 connector adapter (Belgium) (All "G" models)	60H6046	*
RJ11 connector adapter (Denmark) (All "G" models)	60H6047	*
RJ11 connector adapter (Norway, Finland) (All "G" models)	60H6048	*
RJ11 connector adapter (France) (All "G" models)	60H6049	*
RJ11 connector adapter (Germany) (All "G" models)	60H6050	*
RJ11 connector adapter (UK, NZ, HK) (All "G", "M", "B", "H" models)	60H6051	*
RJ11 connector adapter (Italy) (All "G" models)	60H6052	*
RJ11 connector adapter (Netherlands) (All "G" models)	60H6053	*
RJ11 connector adapter (Sweden) (All "G" models)	60H6054	*
RJ11 connector adapter (Switzerland) (All "G" models)	60H6055	*

8126 Windows XP Home Recovery CDs	FRU#	CRU
US/UK/AP/TH (models D3A D3Q D3T E1A E1Q E1T)	39J6250	*
Simplified Chinese (models D2C A2C)	30R4777	*

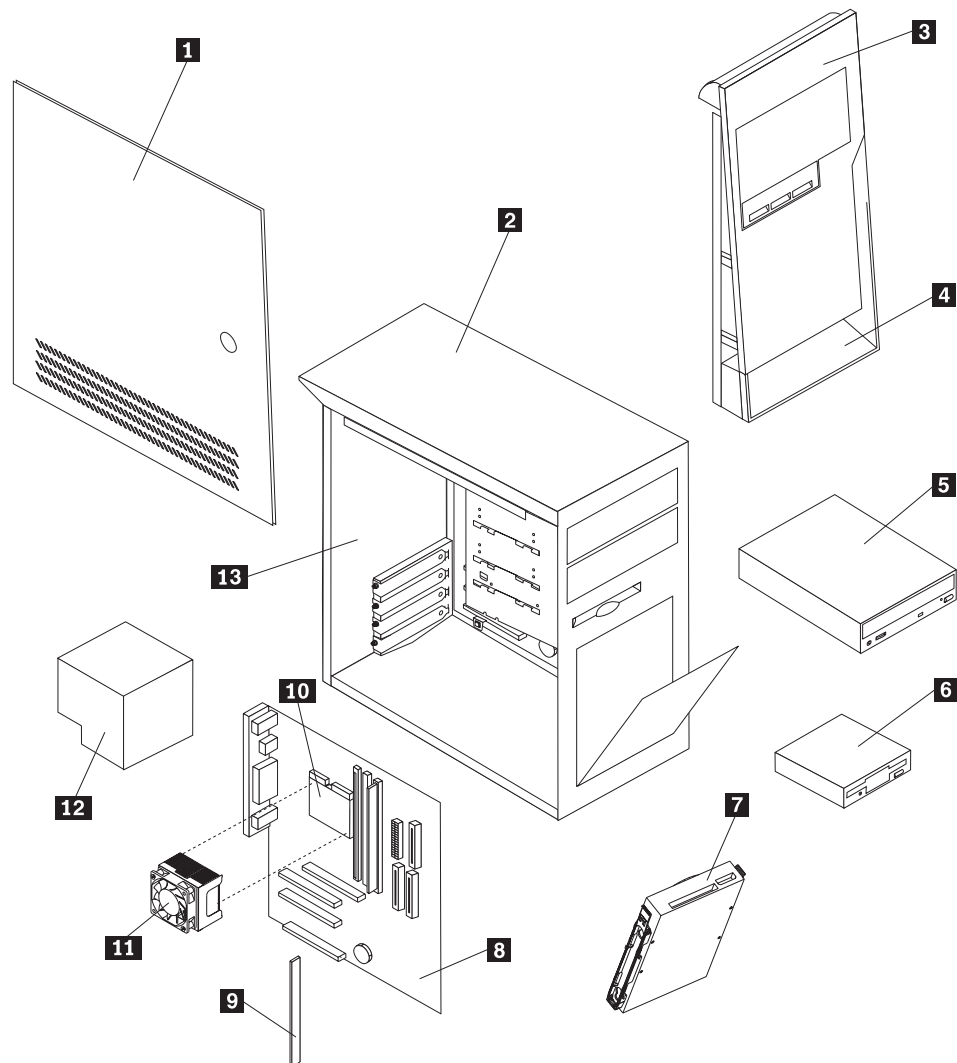
8126 Windows XP Pro Recovery CDs	FRU#	CRU
US/UK/AP/TH (models E2A E2Q E2T 13A 13Q 13T 21A 21Q 21T 31A 31Q 31T)	39J6414	*
Simplified Chinese (models D4V 12V)	30R4820	*



8126 Keyboards (Standard PS/2 Black)	FRU#	CRU
US English (models D1C D2C 41C 11C A1C A2C D3A D3Q E1A E1Q E2A E2Q 13A 13Q 21A 21Q 31A 31Q)	89P8300	*
Chinese/US (models D4V 12V)	89P8306	*
Thailand (models D3T E1T E2T 13T 21T 31T)	89P8334	*

8126 Power Cords	FRU#	CRU
Power Cord (models D3A D3T D4V E1A E1T E2A E2T 12V 13A 13T 21A 21T 31A 31T)	6952301	*
Power Cord (China, HK) (models D1C D2C 41C 11C A1C A2C)	02K0545	*
Power Cord (India) (models D3Q E1Q E2Q 13Q 21Q 31Q)	49P2078	*

## Machine Type 8147



Item #	8147 FRUs	FRU#	CRU
<b>1</b>	Side cover assembly (all models)	59P8547	**

Item #	8147 FRUs	FRU#	CRU
2	"L" Cover assembly (all models)	59P8546	**
3	Front Bezel assembly (all models)	59P8544	**
4	Bezel trim/label kit (all models)	49P1900	**
5	CD-ROM Drive 48X (Black) - w/o volume ctrl and headphone jack (models 11U 13U 21U 31U D1U 34U 24U 15U 15F 36U 36F)	40Y8801	*
5	CD-ROM Drive 48X (Black) - w/o volume ctrl and headphone jack (models 11U 13U 21U 31U D1U 34U 24U 15U 15F 36U 36F)	40Y8805	*
5	CD-ROM Drive 48X (Black) - w/o volume ctrl and headphone jack (models 11U 13U 21U 31U D1U 34U 24U 15U 15F 36U 36F)	40Y8807	*
5	CD-ROM Drive 48X (Black) - w/o volume ctrl and headphone jack (models 11U 13U 21U 31U D1U 34U 24U 15U 15F 36U 36F)	40Y8813	*
5	CD-ROM Drive 48X (Black) - w/o volume ctrl and headphone jack (models 11U 13U 21U 31U D1U 34U 24U 15U 15F 36U 36F)	40Y8929	*
5	CD-RW Drive (48X/32X/48X) (models 12U 22U 32U 25U)	40Y8811	*
5	CD-RW Drive (48X/32X/48X) (models 12U 22U 32U 25U)	40Y8901	*
5	DVD-ROM/CD-RW Combo Drive (48x\32x\48x\16x) (models 23U 33U 14U 35U 35F)	40Y8781	*
5	DVD-ROM/CD-RW Combo Drive (48x\32x\48x\16x) (models 23U 33U 14U 35U 35F)	40Y8903	*
6	Diskette drive, 3.5 1.44MB (models D1U 13U 23U 33U 11U 12U 21U 22U 31U 32U 34U 14U 24U 25U 15U 15F 35U 35F 36U 36F)	40Y9107	*
6	Diskette drive, 3.5 1.44MB (models D1U 13U 23U 33U 11U 12U 21U 22U 31U 32U 34U 14U 24U 25U 15U 15F 35U 35F 36U 36F)	40Y8899	*
6	Diskette drive, 3.5 1.44MB (models D1U 13U 23U 33U 11U 12U 21U 22U 31U 32U 34U 14U 24U 25U 15U 15F 35U 35F 36U 36F)	40Y9105	*
7	Hard disk drive, 40GB EIDE (models D1U 13U 11U 12U 21U 22U 31U 32U 34U 14U 24U 25U 15U 15F 36U 36F)	40Y8757	*
7	Hard disk drive, 80GB EIDE (models 23U 33U 35U 35F)	40Y8758	*
8	System board, 10/100 E-net (models 12U 32U 22U 23U 31U 33U CDU CEU CFU CTO-U 21U 34U CGU 24U 25U 35U 35F 36U 36F)	19R0703	**
8	System board, (10/100 Enet) w/ video buffer -- optional to 19R0703 (models 12U 32U 22U 23U 31U 33U CDU CEU CFU CTO-U 21U 34U CGU 24U 25U 35U 35F 36U 36F)	39J7965	**
8	System board, (10/100 Enet) w/ video buffer -- optional to 19R0703 (models 12U 32U 22U 23U 31U 33U CDU CEU CFU CTO-U 21U 34U CGU 24U 25U 35U 35F 36U 36F)	41D0948	**
8	System board, 10/100 E-net, no AGP (models 11U 13U D1U CAU CBU CCU 14U 15U 15F)	19R0837	**
8	System board, (10/100 Enet) w/ video buffer, no AGP -- optional to 19R0837 (models 11U 13U D1U CAU CBU CCU 14U 15U 15F)	39J7966	**
8	System board, (10/100 Enet) w/ video buffer, no AGP -- optional to 19R0837 (models 11U 13U D1U CAU CBU CCU 14U 15U 15F)	41D0949	**
9	256 MB SDRAM (models D1U 13U 11U 14U 15U 15F)	31P9121	*
9	256 MB SDRAM (models 23U 33U 12U 22U 31U 32U 21U 34U 24U 25U 35U 35F 36U 36F)	73P2683	*
10	Intel P4 2.6 GHz (models D1U CAU)	73P0574	**
10	Intel P4 2.8 GHz (models 13U CBU)	19R2302	**

Item #	8147 FRUs	FRU#	CRU
10	Intel P4 2.8 GHz Prescott (models CCU 11U 14U 15U 15F)	19R0423	* *
10	Intel P4 2.8 GHz Prescott (models 12U CDU)	19R0292	* *
10	Intel P4 3.0 GHz Prescott (models 22U 23U CEU 21U 24U 25U 35U 35F 36U 36F)	19R0294	* *
10	Intel P4 3.2 GHz Prescott (models 31U 32U 33U CFU 34U)	19R0296	* *
10	Intel P4 3.4 GHz Prescott (models CGU)	29R6991	* *
11	Heat sink and fan, Northwood <3.0GHz (models D1U CAU 13U CBU)	32P4004	* *
11	Heat sink and fan, Northwood >=3.0 GHZ and all Prescott (models CCU CDU 23U CEU 11U 22U 33U CFU 21U 34U CGU 14U 24U 25U 15U 15F 35U 35F 36U 36F)	13R9195	* *
11	Heat sink and fan, Northwood >=3.0 GHZ and all Prescott, Dual Heat Pipe -- optional to 13R9195 (models CCU CDU 23U CEU 11U 22U 33U CFU 21U 34U CGU 14U 24U 25U 15U 15F 35U 35F 36U 36F)	13N2951	* *
12	Power supply, AcBel PFC, 230W (models D1U 13U 23U 33U CAU CBU CCU CDU CEU CFU 11U 12U 21U 22U 31U 32U 34U CGU 14U 24U 25U 15U 15F 35U 35F 36U 36F)	74P4300	N
13	Chassis assembly (all models)	59P8542	**

The FRUs listed in the following tables are not illustrated.

8147 FRUs	FRU#	CRU
Front bezel release kit (all models)	25P0069	**
Retainer, Adapter Cards (all models)	59P8564	**
Cable, audio (all models)	75H9219	**
5.25 EMC shield (all models)	19K5548	**
Rubber foot (all models)	03K9655	**
Universal adapter bracket (all models)	32P4743	**
Bezel blanks kit (all models)	25P0068	**
80 mm fan assembly (models with 3.06 GHz microprocessor or greater)	22P4447	**
2 audio front panel (models 23U 33U 35U 35F)	49P1750	**
Cable, audio assembly (all models)	49P1933	**
Cable, dual USB 2.0 (all models)	49P4365	**
Hard disk drive bracket assembly (all models)	59P8543	**
Hard disk drive tray (all models)	59P8549	**
Power switch assembly (all models)	59P8545	**
Bezel, Diskette drive (all models)	59P8548	**
Cable, 2 drop (close spacing) ATA 66/100 w/pull tabs (all models)	59P8571	*
Cable, 2 drop** (large spacing) ATA 66/100 w/pull tabs (all models)	59P8572	*
Cable, Diskette drive (all models)	59P8568	*
Cable clip (all models)	59P8584	*
Battery, 3.0 V (all models)	33F8354	**
Mouse, optical wheel (models D1U 13U 23U 33U 11U 12U 21U 22U 31U 32U 34U 14U 24U 25U 15U 15F 35U 35F 36U 36F)	89P5089	*
64MB, Nvidia GeForce MX 440 (VGA) ATX (models 23U 33U 35U 35F)	73P0715	*

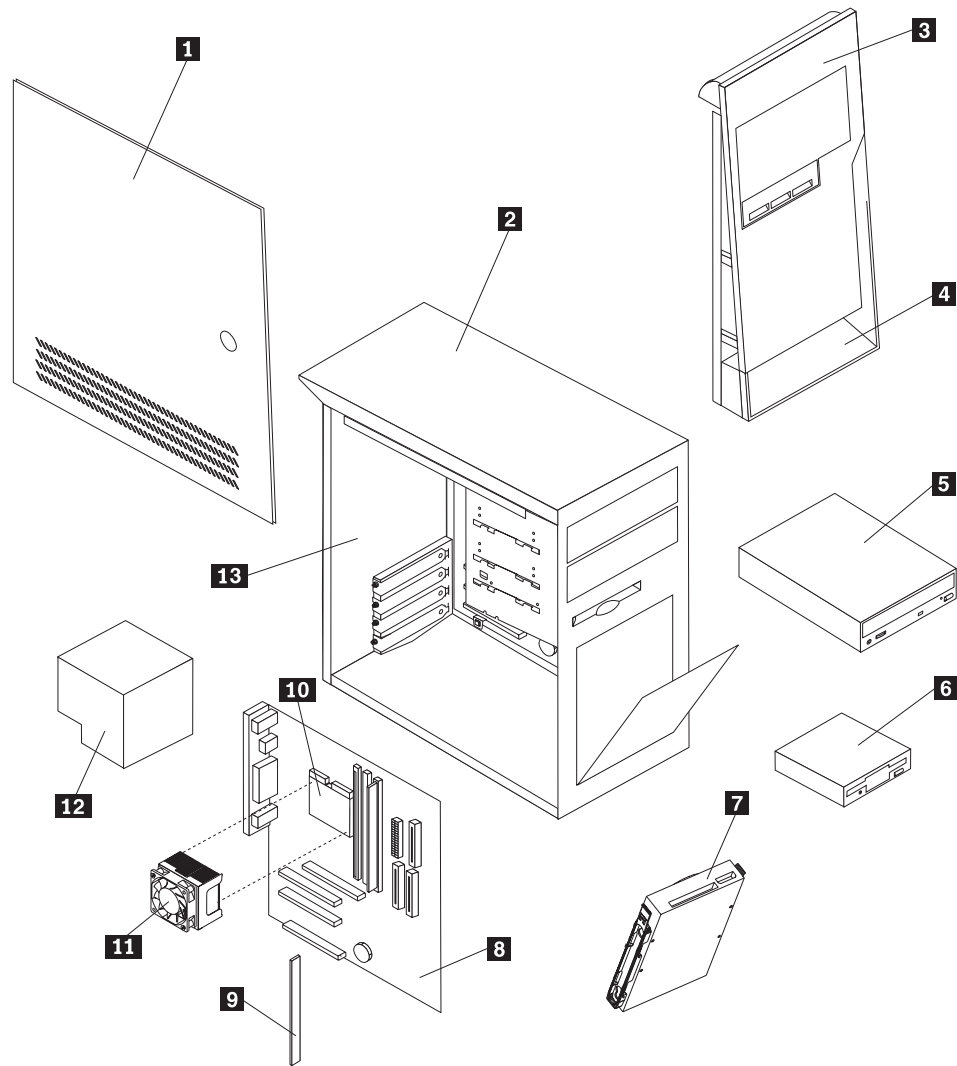
<b>8147 FRUs</b>	<b>FRU#</b>	<b>CRU</b>
System board EMC shield kit (all models)	89P4761	**
Retention kit (all models)	89P6740	**
Heatsink grease, Heat pipe (all models)	13R9195	**
Misc. hardware kit (all models)	09N5764	**
RJ11 connector adapter (Spain, Ireland) (All "G" models)	60H6043	*
RJ11 connector adapter (Austria) (All "G" models)	60H6045	*
RJ11 connector adapter (Belgium) (All "G" models)	60H6046	*
RJ11 connector adapter (Denmark) (All "G" models)	60H6047	*
RJ11 connector adapter (Norway, Finland) (All "G" models)	60H6048	*
RJ11 connector adapter (France) (All "G" models)	60H6049	*
RJ11 connector adapter (Germany) (All "G" models)	60H6050	*
RJ11 connector adapter (UK, NZ, HK) (All "G", "M", "B", "H" models)	60H6051	*
RJ11 connector adapter (Italy) (All "G" models)	60H6052	*
RJ11 connector adapter (Netherlands) (All "G" models)	60H6053	*
RJ11 connector adapter (Sweden) (All "G" models)	60H6054	*
RJ11 connector adapter (Switzerland) (All "G" models)	60H6055	*

<b>8147 Windows XP Pro Recovery CDs</b>	<b>FRU#</b>	<b>CRU</b>
US (models 11U 12U 21U 22U 31U 32U D1U 13U 23U 33U 34U 14U 24U 25U 15U 35U 36U)	39J6414	*
FR (models 15F 35F 36F)	39J6415	*

<b>8147 Keyboards (Standard PS/2 Black)</b>	<b>FRU#</b>	<b>CRU</b>
US English (models D1U 13U 23U 33U 11U 12U 21U 22U 31U 32U 34U 14U 24U 25U 15U 35U 36U)	89P8300	*
French Canadian 445 (models 15F 35F 36F)	89P8311	*
French Canadian 58 (models 15F 35F 36F)	89P8312	*

<b>8147 Power Cords</b>	<b>FRU#</b>	<b>CRU</b>
Power Cord (models D1U 13U 23U 33U CAU CBU CCU CDU CEU CFU 11U 12U 21U 22U 31U 32U 34U CGU 14U 24U 25U 15U 15F 35U 35F 36U 36F)	6952301	*

# Machine Type 8148



Item #	8148 FRUs	FRU#	CRU
<b>1</b>	Side cover assembly (all models)	59P8547	**
<b>2</b>	"L" Cover assembly (all models)	59P8546	**
<b>3</b>	Front Bezel assembly (all models)	59P8544	**
<b>4</b>	Bezel trim/label kit (all models)	49P1900	**
<b>5</b>	CD-ROM Drive 48X (Black) - w/o volume ctrl and headphone jack (models A1U D1U E1U 21U 31U A2U A3G B1G D2G E2G 41U 42U 13U 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 15U A4U A4G B2U D3U 7EG 7HG 7JG 7KG E3G 35U 51G 7RG 7UG 25U A5U A5F 18U 18F 29U 29F A6G 7YG 7ZG)	40Y8801	*
<b>5</b>	CD-ROM Drive 48X (Black) - w/o volume ctrl and headphone jack (models A1U D1U E1U 21U 31U A2U A3G B1G D2G E2G 41U 42U 13U 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 15U A4U A4G B2U D3U 7EG 7HG 7JG 7KG E3G 35U 51G 7RG 7UG 25U A5U A5F 18U 18F 29U 29F A6G 7YG 7ZG)	40Y8805	*

Item #	8148 FRUs	FRU#	CRU
5	CD-ROM Drive 48X (Black) - w/o volume ctrl and headphone jack (models A1U D1U E1U 21U 31U A2U A3G B1G D2G E2G 41U 42U 13U 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 15U A4U A4G B2U D3U 7EG 7HG 7JG 7KG E3G 35U 51G 7RG 7UG 25U A5U A5F 18U 18F 29U 29F A6G 7YG 7ZG)	40Y8807	*
5	CD-ROM Drive 48X (Black) - w/o volume ctrl and headphone jack (models A1U D1U E1U 21U 31U A2U A3G B1G D2G E2G 41U 42U 13U 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 15U A4U A4G B2U D3U 7EG 7HG 7JG 7KG E3G 35U 51G 7RG 7UG 25U A5U A5F 18U 18F 29U 29F A6G 7YG 7ZG)	40Y8813	*
5	CD-ROM Drive 48X (Black) - w/o volume ctrl and headphone jack (models A1U D1U E1U 21U 31U A2U A3G B1G D2G E2G 41U 42U 13U 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 15U A4U A4G B2U D3U 7EG 7HG 7JG 7KG E3G 35U 51G 7RG 7UG 25U A5U A5F 18U 18F 29U 29F A6G 7YG 7ZG)	40Y8829	*
5	DVD-ROM 16X/48X (Black) (models 7GG 7MG 7NG 7PG 7QG 7VG 7WG)	40Y8811	*
5	CD-RW Drive (48X/32X/48X) (models 12U 22U 32U 26U 28U 28F)	40Y8901	*
5	DVD-ROM/CD-RW Combo Drive (48x\32x\48x\16x) (models 23U 33U 16U)	40Y8781	*
5	DVD-ROM/CD-RW Combo Drive (48x\32x\48x\16x) (models 23U 33U 16U)	40Y8903	*
6	Diskette drive, 3.5 1.44MB (models A1U D1U E1U 12U 21U 22U 31U 32U A2U A3G B1G D2G E2G 41U 42U 13U 14G 15G 23U 24G 33U 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 15U A4U A4G B2U D3U 7EG 7GG 7HG 7JG 7KG E3G 35U 51G 7MG 7NG 7PG 7QG 7RG 7UG 16U 25U 26U A5U A5F 18U 18F 28U 28F 29U 29F A6G 7VG 7WG 7YG 7ZG)	40Y9107	*
6	Diskette drive, 3.5 1.44MB (models A1U D1U E1U 12U 21U 22U 31U 32U A2U A3G B1G D2G E2G 41U 42U 13U 14G 15G 23U 24G 33U 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 15U A4U A4G B2U D3U 7EG 7GG 7HG 7JG 7KG E3G 35U 51G 7MG 7NG 7PG 7QG 7RG 7UG 16U 25U 26U A5U A5F 18U 18F 28U 28F 29U 29F A6G 7VG 7WG 7YG 7ZG)	40Y8899	*
6	Diskette drive, 3.5 1.44MB (models A1U D1U E1U 12U 21U 22U 31U 32U A2U A3G B1G D2G E2G 41U 42U 13U 14G 15G 23U 24G 33U 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 15U A4U A4G B2U D3U 7EG 7GG 7HG 7JG 7KG E3G 35U 51G 7MG 7NG 7PG 7QG 7RG 7UG 16U 25U 26U A5U A5F 18U 18F 28U 28F 29U 29F A6G 7VG 7WG 7YG 7ZG)	40Y9105	*
7	Hard disk drive, 40GB EIDE (models A1U D1U E1U 12U 21U 22U 31U 32U A2U A3G B1G D2G E2G 41U 42U 13U 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 15U A4U A4G B2U D3U 7EG 7GG 7HG 7JG 7KG E3G 35U 51G 7MG 7NG 7PG 7QG 7RG 7UG 16U 25U 26U A5U A5F 18U 18F 28U 28F 29U 29F A6G 7VG 7WG 7YG 7ZG)	40Y8757	*
7	Hard disk drive, 80GB EIDE (models 23U 33U)	40Y8758	*
8	System board, 10/100 E-net (models 12U 31U 22U 32U 23U 33U CGU CHU CJU 21U 35U 51G CMU 25U 26U 28U 28F 29U 29F)	19R0703	**
8	System board, (10/100 Enet) w/ video buffer -- optional to 19R0703 (models 12U 31U 22U 32U 23U 33U CGU CHU CJU 21U 35U 51G CMU 25U 26U 28U 28F 29U 29F)	39J7965	**
8	System board, (10/100 Enet) w/ video buffer -- optional to 19R0703 (models 12U 31U 22U 32U 23U 33U CGU CHU CJU 21U 35U 51G CMU 25U 26U 28U 28F 29U 29F)	41D0948	**

Item #	8148 FRUs	FRU#	CRU
<b>8</b>	System board, 10/100 E-net, no AGP (models A1U D1U E1U A2U A3G B1G D2G E2G 41U 42U 13U 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG CAU CBU CCU CDU CEU CFU 15U A4U A4G B2U D3U 7EG 7GG 7HG 7JG 7KG E3G 7MG 7NG 7PG 7QG 7RG 7UG CKU CLU 16U A5U A5F 18U 18F A6G 7VG 7WG 7YG 7ZG)	19R0837	**
<b>8</b>	System board, (10/100 Enet) w/ video buffer, no AGP -- optional to 19R0837 (models A1U D1U E1U A2U A3G B1G D2G E2G 41U 42U 13U 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG CAU CBU CCU CDU CEU CFU 15U A4U A4G B2U D3U 7EG 7GG 7HG 7JG 7KG E3G 7MG 7NG 7PG 7QG 7RG 7UG CKU CLU 16U A5U A5F 18U 18F A6G 7VG 7WG 7YG 7ZG)	39J7966	**
<b>8</b>	System board, (10/100 Enet) w/ video buffer, no AGP -- optional to 19R0837 (models A1U D1U E1U A2U A3G B1G D2G E2G 41U 42U 13U 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG CAU CBU CCU CDU CEU CFU 15U A4U A4G B2U D3U 7EG 7GG 7HG 7JG 7KG E3G 7MG 7NG 7PG 7QG 7RG 7UG CKU CLU 16U A5U A5F 18U 18F A6G 7VG 7WG 7YG 7ZG)	41D0949	**
<b>9</b>	128 MB SDRAM (models A2U A3G B1G D2G E2G 41U 71G 73G 75G 77G 7EG)	31P9120	*
<b>9</b>	256 MB SDRAM (models A1U D1U E1U 42U 13U 14G 15G 72G 74G 76G 78G 79G 7AG 7BG 15U A4U A4G B2U D3U 7GG 7HG 7JG 7KG E3G 7MG 7NG 7PG 7QG 7RG 16U A5U A5F 18U 18F A6G 7VG 7WG 7YG)	31P9121	*
<b>9</b>	256 MB SDRAM (models 12U 22U 31U 32U 23U 24G 33U 34G 7CG 7DG 21U 35U 51G 7UG 25U 26U 28U 28F 29U 29F 7ZG)	73P2683	*
<b>10</b>	Intel Celeron 2.4 GHz (models A1U A2U A3G 71G 72G CAU)	88P7699	* *
<b>10</b>	Intel Celeron 2.6 GHz (models D1U CBU)	13R8907	* *
<b>10</b>	Intel Celeron 2.4 GHz (models A4U A4G 7EG 7GG 7JG)	19R0780	* *
<b>10</b>	Intel Celeron 2.53 GHz (models B1G 73G 74G B2U 7MG A5U A5F)	19R0417	* *
<b>10</b>	Intel Celeron 2.66 GHz (models D2G 76G 75G D3U 7NG)	19R0419	* *
<b>10</b>	Intel Celeron 2.8 GHz (models E1U E2G 77G 78G CCU 7PG 7VG)	19R0421	* *
<b>10</b>	Intel Celeron 2.93 GHz (models E3G 7QG 7RG CKU)	29R6989	* *
<b>10</b>	Intel Celeron 3.06 GHz (models CLU A6G 7YG 7WG)	29R6990	* *
<b>10</b>	Intel P4 2.6 GHz (models 41U 42U CDU)	73P0574	* *
<b>10</b>	Intel P4 2.8 GHz (models 13U 14G 7AG CEU 7HG)	19R2302	* *
<b>10</b>	Intel P4 2.8 GHz (models 79G)	74P1631	* *
<b>10</b>	Intel P4 2.8 GHz (models 15G 7BG CFU 15U 7KG 16U 18U 18F)	19R0423	* *
<b>10</b>	Intel P4 2.8 GHz (models 12U CGU 7ZG)	19R0292	* *
<b>10</b>	Intel P4 3.0 GHz (models 22U 23U 24G 7CG CHU 21U 25U 26U 28U 28F 29U 29F)	19R0294	* *
<b>10</b>	Intel P4 3.2 GHz (models 31U 32U 33U 34G 7DG CJU 35U)	19R0296	* *
<b>10</b>	Intel P4 3.4 GHz (models 51G 7UG CMU)	29R6991	* *
<b>11</b>	Heat sink and fan, Northwood <3.0 GHZ (models A1U A2U A3G 71G 72G CAU D1U CBU 41U 42U CDU 13U 14G 7AG CEU 7HG 79G)	32P4004	* *
<b>11</b>	Heat sink and fan, Northwood >=3.0 GHZ and all Prescott (models 12U 22U 31U 32U 15G 7BG CFU 23U 24G 7CG CHU 33U 34G 7DG CJU CGU 15U B1G 73G 74G D2G 76G E2G 77G 78G CCU 75G A4U A4G CKU 7EG 7GG 7JG B2U CLU D3U CMU 7KG 35U 51G 7UG 7MG 7NG 7PG 21U 16U 25U 26U 16U A5U A5F 18U 18F 28U 28F 29U 29F A6G 7YG 7WG 7VG 7ZG)	13R9195	* *



Item #	8148 FRUs	FRU#	CRU
<b>11</b>	Heat sink and fan, Northwood >=3.0 GHZ and all Prescott, Dual Heat Pipe -- optional to 13R9195 (models 12U 22U 31U 32U 15G 7BG CFU 23U 24G 7CG CHU 33U 34G 7DG CJU CGU 15U B1G 73G 74G D2G 76G E2G 77G 78G CCU 75G A4U A4G CKU 7EG 7GG 7JG B2U CLU D3U CMU 7KG 35U 51G 7UG 7MG 7NG 7PG 21U 16U 25U 26U 16U A5U A5F 18U 18F 28U 28F 29U 29F A6G 7YG 7WG 7VG 7ZG)	13N2951	* *
<b>12</b>	Power supply, AcBel PFC, 230W (models A1U D1U E1U 12U 21U 22U 31U 32U A2U A3G B1G D2G E2G 41U 42U 13U 14G 15G 23U 24G 33U 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG CAU CBU CCU CDU CEU CFU CGU CHU CJU 15U A4U A4G B2U D3U 7EG 7GG 7HG 7JG CKU CLU CMU 7KG E3G 35U 51G 7MG 7NG 7PG 7QG 7RG 7UG 16U 25U 26U A5U A5F 18U 18F 28U 28F 29U 29F A6G 7VG 7WG 7YG 7ZG)	74P4300	N
<b>13</b>	Chassis assembly (all models)	59P8542	**

The FRUs listed in the following table are not illustrated.

8148 FRUs	FRU#	CRU
Front bezel release kit (all models)	25P0069	**
Retainer, Adapter Cards (all models)	59P8564	**
Cable, audio (all models)	75H9219	**
5.25 EMC shield (all models)	19K5548	**
Rubber foot (all models)	03K9655	**
Universal adapter bracket (all models)	32P4743	**
Bezel blanks kit (all models)	25P0068	**
80 mm fan assembly (models with 3.06 GHz microprocessor or greater)	22P4447	**
2 audio front panel (models 12U 13U 23U 33U 7HG)	49P1750	**
Cable, audio assembly (all models)	49P1933	**
Cable, dual USB 2.0 (all models)	49P4365	**
Hard disk drive bracket assembly (all models)	59P8543	**
Hard disk drive tray (all models)	59P8549	**
Power switch assembly (all models)	59P8545	**
Bezel, Diskette drive (all models)	59P8548	**
Cable, 2 drop (close spacing) ATA 66/100 w/pull tabs (all models)	59P8571	*
Cable, 2 drop** (large spacing) ATA 66/100 w/pull tabs (all models)	59P8572	*
Cable, Diskette drive (all models)	59P8568	*
Battery, 3.0 V (all models)	33F8354	**
Mouse, PS/2 2BUTTON (Black) (models A2U 41U)	24P0383	*
Mouse, optical wheel (models A1U D1U E1U 12U 21U 22U 31U 32U 42U 13U 23U 33U A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 15U A4U A4G B2U D3U 7EG 7GG 7HG 7JG 7KG E3G 35U 51G 7MG 7NG 7PG 7QG 7RG 7UG 16U 25U 26U A5U A5F 18U 18F 28U 28F 29U 29F A6G 7VG 7WG 7YG 7ZG)	89P5089	*
Cable clip (all models)	59P8584	*
System board EMC shield kit (all models)	89P4761	**
Retention kit (all models)	89P6740	**



8148 FRUs	FRU#	CRU
Heatsink grease, Heat pipe (all models)	13R9195	**
Misc. hardware kit (all models)	09N5764	**
RJ11 connector adapter (Spain, Ireland) (All "G" models)	60H6043	*
RJ11 connector adapter (Austria) (All "G" models)	60H6045	*
RJ11 connector adapter (Belgium) (All "G" models)	60H6046	*
RJ11 connector adapter (Denmark) (All "G" models)	60H6047	*
RJ11 connector adapter (Norway, Finland) (All "G" models)	60H6048	*
RJ11 connector adapter (France) (All "G" models)	60H6049	*
RJ11 connector adapter (Germany) (All "G" models)	60H6050	*
RJ11 connector adapter (UK, NZ, HK) (All "G", "M", "B", "H" models)	60H6051	*
RJ11 connector adapter (Italy) (All "G" models)	60H6052	*
RJ11 connector adapter (Netherlands) (All "G" models)	60H6053	*
RJ11 connector adapter (Sweden) (All "G" models)	60H6054	*
RJ11 connector adapter (Switzerland) (All "G" models)	60H6055	*

8148 Windows XP Home Recovery CDs	FRU#	CRU
US (models A2U 41U 71G 73G 75G 77G 7EG 7GG 7HG 7KG 7MG 7NG 7PG 7QG 7WG)	39J6250	*
FR (models 71G 73G 75G 77G 7EG 7GG 7HG 7KG 7MG 7NG 7PG 7QG 7WG)	39J6251	*
GR (models 71G 73G 75G 77G 7EG 7GG 7HG 7KG 7MG 7NG 7PG 7QG 7WG)	39J6252	*
IT (models 71G 73G 75G 77G 7EG 7GG 7HG 7KG 7MG 7NG 7PG 7QG 7WG)	39J6254	*
DK (models 71G 73G 75G 77G 7EG 7GG 7HG 7KG 7MG 7NG 7PG 7QG 7WG)	39J6257	*
NL (models 71G 73G 75G 77G 7EG 7GG 7HG 7KG 7MG 7NG 7PG 7QG 7WG)	39J6260	*
AE (models 71G 73G 75G 77G 7EG 7GG 7HG 7KG 7MG 7NG 7PG 7QG 7WG)	39J6264	*
SV (models 71G 73G 75G 77G 7EG 7GG 7HG 7KG 7MG 7NG 7PG 7QG 7WG)	39J6256	*
HE (models 71G 73G 75G 77G 7EG 7GG 7HG 7KG 7MG 7NG 7PG 7QG 7WG)	39J6261	*
FI (models 71G 73G 75G 77G 7EG 7GG 7HG 7KG 7MG 7NG 7PG 7QG 7WG)	39J6258	*
NO (models 71G 73G 75G 77G 7EG 7GG 7HG 7KG 7MG 7NG 7PG 7QG 7WG)	39J6259	*
PL (models 71G 73G 75G 77G 7EG 7GG 7HG 7KG 7MG 7NG 7PG 7QG 7WG)	39J6262	*
PO (models 71G 73G 75G 77G 7EG 7GG 7HG 7KG 7MG 7NG 7PG 7QG 7WG)	39J6268	*
RU (models 71G 73G 75G 77G 7EG 7GG 7HG 7KG 7MG 7NG 7PG 7QG 7WG)	41D1948	*
RE (models 71G 73G 75G 77G 7EG 7GG 7HG 7KG 7MG 7NG 7PG 7QG 7WG)	41D1947	*
HU (models 71G 73G 75G 77G 7EG 7GG 7HG 7KG 7MG 7NG 7PG 7QG 7WG)	39J6267	*
CZ (models 71G 73G 75G 77G 7EG 7GG 7HG 7KG 7MG 7NG 7PG 7QG 7WG)	39J6263	*
TR (models 71G 73G 75G 77G 7EG 7GG 7HG 7KG 7MG 7NG 7PG 7QG 7WG)	39J6266	*
GK (models 71G 73G 75G 77G 7EG 7GG 7HG 7KG 7MG 7NG 7PG 7QG 7WG)	39J6269	*

8148 Windows XP Pro Recovery CDs	FRU #	CRU
US (models A1U D1U E1U 12U 21U 22U 31U 32U A3G B1G D2G E2G 42U 13U 14G 15G 23U 24G 33U 34G 72G 74G 76G 78G 79G 7AG 7BG 7CG 7DG 15U A4U A4G B2U D3U 7JG E3G 35U 51G 7RG 7UG 16U 25U 26U A5U 18U 28U 29U A6G 7VG 7YG 7ZG)	39J6414	*

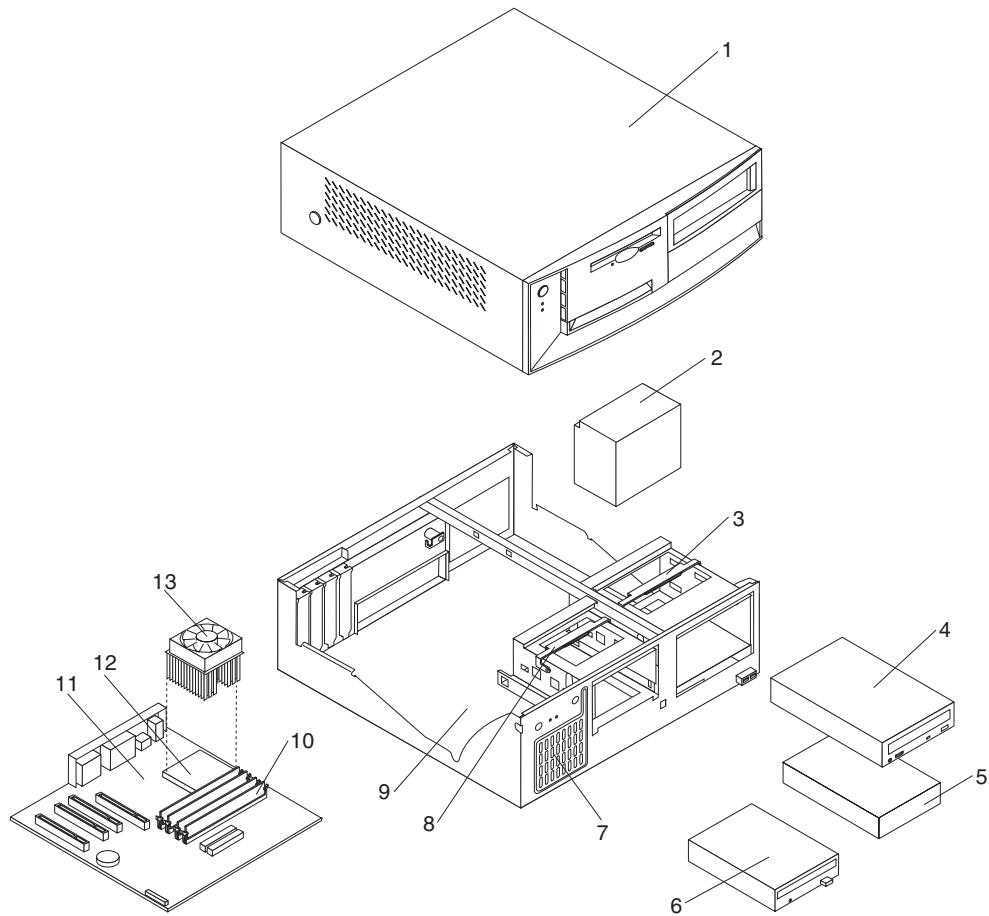
8148 Windows XP Pro Recovery CDs	FRU #	CRU
FR (models A3G B1G D2G E2G 14G 15G 24G 34G 72G 74G 76G 78G 79G 7AG 7BG 7CG 7DG A4G 7JG E3G 51G 7RG 7UG A5F 18F 28F 29F A6G 7VG 7YG 7ZG)	39J6415	*
GR (models A3G B1G D2G E2G 14G 15G 24G 34G 72G 74G 76G 78G 79G 7AG 7BG 7CG 7DG A4G 7JG E3G 51G 7RG 7UG A6G 7VG 7YG 7ZG)	39J6416	*
IT (models A3G B1G D2G E2G 14G 15G 24G 34G 72G 74G 76G 78G 79G 7AG 7BG 7CG 7DG A4G 7JG E3G 51G 7RG 7UG A6G 7VG 7YG 7ZG)	39J6418	*
SP (models A3G B1G D2G E2G 14G 15G 24G 34G 72G 74G 76G 78G 79G 7AG 7BG 7CG 7DG A4G 7JG E3G 51G 7RG 7UG A6G 7VG 7YG 7ZG)	39J6417	*
DK (models A3G B1G D2G E2G 14G 15G 24G 34G 72G 74G 76G 78G 79G 7AG 7BG 7CG 7DG A4G 7JG E3G 51G 7RG 7UG A6G 7VG 7YG 7ZG)	39J6421	*
NL models A3G B1G D2G E2G 14G 15G 24G 34G 72G 74G 76G 78G 79G 7AG 7BG 7CG 7DG A4G 7JG E3G 51G 7RG 7UG A6G 7VG 7YG 7ZG)	39J6424	*
AE (models A3G B1G D2G E2G 14G 15G 24G 34G 72G 74G 76G 78G 79G 7AG 7BG 7CG 7DG A4G 7JG E3G 51G 7RG 7UG A6G 7VG 7YG 7ZG)	39J6428	*
SV (models A3G B1G D2G E2G 14G 15G 24G 34G 72G 74G 76G 78G 79G 7AG 7BG 7CG 7DG A4G 7JG E3G 51G 7RG 7UG A6G 7VG 7YG 7ZG)	39J6420	*
HE (models A3G B1G D2G E2G 14G 15G 24G 34G 72G 74G 76G 78G 79G 7AG 7BG 7CG 7DG A4G 7JG E3G 51G 7RG 7UG A6G 7VG 7YG 7ZG)	39J6425	*
FI (models A3G B1G D2G E2G 14G 15G 24G 34G 72G 74G 76G 78G 79G 7AG 7BG 7CG 7DG A4G 7JG E3G 51G 7RG 7UG A6G 7VG 7YG 7ZG)	39J6422	*
NO (models A3G B1G D2G E2G 14G 15G 24G 34G 72G 74G 76G 78G 79G 7AG 7BG 7CG 7DG A4G 7JG E3G 51G 7RG 7UG A6G 7VG 7YG 7ZG)	39J6423	*
PL (models A3G B1G D2G E2G 14G 15G 24G 34G 72G 74G 76G 78G 79G 7AG 7BG 7CG 7DG A4G 7JG E3G 51G 7RG 7UG A6G 7VG 7YG 7ZG)	39J6426	*
PO (models A3G B1G D2G E2G 14G 15G 24G 34G 72G 74G 76G 78G 79G 7AG 7BG 7CG 7DG A4G 7JG E3G 51G 7RG 7UG A6G 7VG 7YG 7ZG)	39J6432	*
RU (models A3G B1G D2G E2G 14G 15G 24G 34G 72G 74G 76G 78G 79G 7AG 7BG 7CG 7DG A4G 7JG E3G 51G 7RG 7UG A6G 7VG 7YG 7ZG)	41D1950	*
RE (models A3G B1G D2G E2G 14G 15G 24G 34G 72G 74G 76G 78G 79G 7AG 7BG 7CG 7DG A4G 7JG E3G 51G 7RG 7UG A6G 7VG 7YG 7ZG)	41D1949	*
HU (models A3G B1G D2G E2G 14G 15G 24G 34G 72G 74G 76G 78G 79G 7AG 7BG 7CG 7DG A4G 7JG E3G 51G 7RG 7UG A6G 7VG 7YG 7ZG)	39J6431	*
CZ (models A3G B1G D2G E2G 14G 15G 24G 34G 72G 74G 76G 78G 79G 7AG 7BG 7CG 7DG A4G 7JG E3G 51G 7RG 7UG A6G 7VG 7YG 7ZG)	39J6427	*
TR (models A3G B1G D2G E2G 14G 15G 24G 34G 72G 74G 76G 78G 79G 7AG 7BG 7CG 7DG A4G 7JG E3G 51G 7RG 7UG A6G 7VG 7YG 7ZG)	39J6430	*
GK (models A3G B1G D2G E2G 14G 15G 24G 34G 72G 74G 76G 78G 79G 7AG 7BG 7CG 7DG A4G 7JG E3G 51G 7RG 7UG A6G 7VG 7YG 7ZG)	39J6433	*
SL (models A3G B1G D2G E2G 14G 15G 24G 34G 72G 74G 76G 78G 79G 7AG 7BG 7CG 7DG A4G 7JG E3G 51G 7RG 7UG A6G 7VG 7YG 7ZG)	39J6434	*
Multilingual 1 (models A3G B1G D2G E2G 14G 15G 24G 34G 72G 74G 76G 78G 79G 7AG 7BG 7CG 7DG A4G 7JG E3G 51G 7RG 7UG A6G 7VG 7YG 7ZG)	39J7221	*
Multilingual 2 (models A3G B1G D2G E2G 14G 15G 24G 34G 72G 74G 76G 78G 79G 7AG 7BG 7CG 7DG A4G 7JG E3G 51G 7RG 7UG A6G 7VG 7YG 7ZG)	39J7222	*

Keyboard (Preferred Pro Fullsize, PS/2, Stealth Black)	FRU#	CRU
US English (models A1U D1U E1U 12U 21U 22U 31U 32U A2U A3G B1G D2G E2G 41U 42U 13U 14G 15G 23U 24G 33U 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 15U A4U A4G B2U D3U 7EG 7GG 7HG 7JG 7KG E3G 35U 51G 7MG 7NG 7PG 7QG 7RG 7UG 16U 25U 26U A5U 18U 28U 29U A6G 7VG 7WG 7YG 7ZG)	89P8300	*
Arabic (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8301	*
Belgian/French (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8302	*
Bulgarian (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8305	*
Czech (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8307	*
Danish (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8308	*
Dutch (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8309	*
French (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8310	*
French Canadian 445 (models A5F 18F 28F 29F)	89P8311	*
French Canadian 58 (models A5F 18F 28F 29F)	89P8312	*
German (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8313	*
Greek (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8314	*
Belgian/UK (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8303	*
Hebrew (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8315	*
Hungarian (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8316	*
Iceland (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8317	*
Italian 141 (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8318	*
Italian 142 (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8319	*

Keyboard (Preferred Pro Fullsize, PS/2, Stealth Black)	FRU#	CRU
Norwegian (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8323	*
Polish (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8324	*
Portuguese (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8325	*
Romanian (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8326	*
Russian (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8327	*
Russian/Cyrillic (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8328	*
Serbian/Cyrillic (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8329	*
Slovak (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8330	*
Spanish (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8331	*
Swedish/Finn (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8332	*
Swiss F/G (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8333	*
Turkish 440 (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8335	*
Turkish 179 (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8336	*
UK English (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8337	*
US Euro (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8338	*
Yugoslav/Latin (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	89P8339	*

8148 Power Cords	FRU#	CRU
Power Cord (models A1U D1U E1U 12U 21U 22U 31U 32U A2U A3G B1G D2G E2G 41U 42U 13U 14G 15G 23U 24G 33U 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG CAU CBU CCU CDU CEU CFU CGU CHU CJU 15U A4U A4G B2U D3U 7EG 7GG 7HG 7JG CKU CLU CMU 7KG E3G 35U 51G 7MG 7NG 7PG 7QG 7RG 7UG 16U 25U 26U A5U A5F 18U 18F 28U 28F 29U 29F A6G 7VG 7WG 7YG 7ZG)	6952301	*
Power Cord (EMEA, ANZ, ASEAN Eng, Korea) (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	13F9978	*
Power Cord (EMEA, ANZ, ASEAN Eng, HK Eng) (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	14F0032	*
Power Cord (EMEA) (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	13F9996	*
Power Cord (EMEA, LA) (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	14F0068	*
Power Cord (EMEA) (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	14F0086	*
Power Cord (EMEA, ANZ, ASEAN Eng) (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	14F0014	*
Power Cord (EMEA) (models A3G B1G D2G E2G 14G 15G 24G 34G 71G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG A4G 7EG 7GG 7HG 7JG 7KG E3G 51G 7MG 7NG 7PG 7QG 7RG 7UG A6G 7VG 7WG 7YG 7ZG)	14F0050	*

# Machine Type 8149



Item #	8149 FRUs	FRU#	CRU
1	Top cover assembly (all models)	88P5962	**
2	230W Power Supply - AcBel PFC (models 11U 21U 31U 41U 14U CAU CBU CCU CDU CEU CFU 33U CGU 24U)	74P4300	N
2	230W Power Supply - AcBel PFC China (models A1S A1Y D1S D1Y D2S D2Y E1S E1Y E2S E2P E2Y 41S 41P 41Y 42S 42P 42Y 11S 11P 11Y 12S 12Y 13S 13P 13Y 14S 14P 14Y 15S 15P 15Y 22S 22Y 23S 23P 23Y 32S 32P 32Y A2S A2Y B1S B1P B1Y E3S E3Y E4S E4Y E5S E5Y 25S 25Y 34S 34Y)	74P4301	N
3	Pivot lock, 5.25 DASD (all models)	09N5747	**
4	CD-ROM Drive 48X - Black w/o jack & vol (models 11U 21U 31U A1S A1Y D1S D1Y D2S D2Y E1S E1Y E2S E2P E2Y 41U 41S 41P 41Y 11S 11P 11Y 12S 12Y 13S 13P 13Y 14U 14S 14P 14Y 15S 15P 15Y 22S 22Y 23S 23P 23Y 32S 32P 32Y A2S A2Y B1S B1P B1Y 33U 24U E3S E3Y E4S E4Y E5S E5Y 25S 25Y 34S 34Y)	40Y8801	**
4	CD-ROM Drive 48X - Black w/o jack & vol (models 11U 21U 31U A1S A1Y D1S D1Y D2S D2Y E1S E1Y E2S E2P E2Y 41U 41S 41P 41Y 11S 11P 11Y 12S 12Y 13S 13P 13Y 14U 14S 14P 14Y 15S 15P 15Y 22S 22Y 23S 23P 23Y 32S 32P 32Y A2S A2Y B1S B1P B1Y 33U 24U E3S E3Y E4S E4Y E5S E5Y 25S 25Y 34S 34Y)	40Y8805	**

Item #	8149 FRUs	FRU#	CRU
4	CD-ROM Drive 48X - Black w/o jack & vol (models 11U 21U 31U A1S A1Y D1S D1Y D2S D2Y E1S E1Y E2S E2P E2Y 41U 41S 41P 41Y 11S 11P 11Y 12S 12Y 13S 13P 13Y 14U 14S 14P 14Y 15S 15P 15Y 22S 22Y 23S 23P 23Y 32S 32P 32Y A2S A2Y B1S B1P B1Y 33U 24U E3S E3Y E4S E4Y E5S E5Y 25S 25Y 34S 34Y)	40Y8807	**
4	CD-ROM Drive 48X - Black w/o jack & vol (models 11U 21U 31U A1S A1Y D1S D1Y D2S D2Y E1S E1Y E2S E2P E2Y 41U 41S 41P 41Y 11S 11P 11Y 12S 12Y 13S 13P 13Y 14U 14S 14P 14Y 15S 15P 15Y 22S 22Y 23S 23P 23Y 32S 32P 32Y A2S A2Y B1S B1P B1Y 33U 24U E3S E3Y E4S E4Y E5S E5Y 25S 25Y 34S 34Y)	40Y8813	**
4	CD-ROM Drive 48X - Black w/o jack & vol (models 11U 21U 31U A1S A1Y D1S D1Y D2S D2Y E1S E1Y E2S E2P E2Y 41U 41S 41P 41Y 11S 11P 11Y 12S 12Y 13S 13P 13Y 14U 14S 14P 14Y 15S 15P 15Y 22S 22Y 23S 23P 23Y 32S 32P 32Y A2S A2Y B1S B1P B1Y 33U 24U E3S E3Y E4S E4Y E5S E5Y 25S 25Y 34S 34Y)	40Y8929	**
5	Hard disk drive, 40 GB EIDE (models 11U 21U 31U A1S A1Y D1S D1Y D2S D2Y E1S E1Y E2S E2P E2Y 41U 41S 41P 41Y 42S 42P 42Y 11S 11P 11Y 14U 14S 14P 14Y A2S A2Y B1S B1P B1Y 33U 24U E3S E3Y E4S E4Y E5S E5Y)	40Y8757	**
5	Hard disk drive, 80 GB EIDE (models 12S 12Y 13S 13P 13Y 15S 15P 15Y 22S 22Y 23S 23P 23Y 32S 32P 32Y 25S 25Y 34S 34Y)	40Y8758	**
6	Diskette drive, 3.5 1.44 MB (models 11U 21U 31U A1S A1Y D1S D1Y D2S D2Y E1S E1Y E2S E2P E2Y 41U 41S 41P 41Y 42S 42P 42Y 11S 11P 11Y 12S 12Y 13S 13P 13Y 14U 14S 14P 14Y 15S 15P 15Y 22S 22Y 23S 23P 23Y 32S 32P 32Y A2S A2Y B1S B1P B1Y 33U 24U E3S E3Y E4S E4Y E5S E5Y 25S 25Y 34S 34Y)	40Y9107	**
6	Diskette drive, 3.5 1.44 MB (models 11U 21U 31U A1S A1Y D1S D1Y D2S D2Y E1S E1Y E2S E2P E2Y 41U 41S 41P 41Y 42S 42P 42Y 11S 11P 11Y 12S 12Y 13S 13P 13Y 14U 14S 14P 14Y 15S 15P 15Y 22S 22Y 23S 23P 23Y 32S 32P 32Y A2S A2Y B1S B1P B1Y 33U 24U E3S E3Y E4S E4Y E5S E5Y 25S 25Y 34S 34Y)	40Y8899	**
6	Diskette drive, 3.5 1.44 MB (models 11U 21U 31U A1S A1Y D1S D1Y D2S D2Y E1S E1Y E2S E2P E2Y 41U 41S 41P 41Y 42S 42P 42Y 11S 11P 11Y 12S 12Y 13S 13P 13Y 14U 14S 14P 14Y 15S 15P 15Y 22S 22Y 23S 23P 23Y 32S 32P 32Y A2S A2Y B1S B1P B1Y 33U 24U E3S E3Y E4S E4Y E5S E5Y 25S 25Y 34S 34Y)	40Y9105	**
7	Speaker assembly (all models)	00N5151	*
8	Pivot lock, 3.5 Diskette drive (all models)	09N5748	**
9	Chassis/top cover kit (all models)	88P5963	**
10	128 MB SDRAM (models A1S A1Y D1S D1Y)	31P9120	*
10	256 MB SDRAM (models 11U D2S D2Y E1S E1Y E2S E2P E2Y 41U 41S 41P 41Y 42S 42P 42Y 11S 11P 11Y 12S 12Y 13S 13P 13Y 14U 14S 14P 14Y 22S 22Y A2S A2Y B1S B1P B1Y E3S E3Y E4S E4Y E5S E5Y)	31P9121	*
10	256 MB SDRAM (models 21U 31U 15S 15P 15Y 23S 23P 23Y 32S 32P 32Y 33U 24U 25S 25Y 34S 34Y)	73P2683	*
11	System board, 10/100 E-net (models 21U 31U 12S 12Y 13S 13P 13Y 22S 22Y 23S 23P 23Y 32S 32P 32Y CDU CEU CFU CTO-U 33U CGU 24U)	19R0703	**
11	System board, (10/100 Enet) w/ video buffer -- optional to 19R0703 (models 21U 31U 12S 12Y 13S 13P 13Y 22S 22Y 23S 23P 23Y 32S 32P 32Y CDU CEU CFU CTO-U 33U CGU 24U)	39J7965	**



Item #	8149 FRUs	FRU#	CRU
11	System board, (10/100 Enet) w/ video buffer -- optional to 19R0703 (models 21U 31U 12S 12Y 13S 13P 13Y 22S 22Y 23S 23P 23Y 32S 32P 32Y CDU CEU CFU CTO-U 33U CGU 24U)	41D0948	**
11	System board, 10/100 E-net, no AGP (models 11U A1S A1Y D1S D1Y D2S D2Y E1S E1Y E2S E2P E2Y 41U 41S 41P 41Y 42S 42P 42Y 11S 11P 11Y 14U 14S 14P 14Y 15S 15P 15Y CAU CBU CCU A2S A2Y B1S B1P B1Y E3S E3Y E4S E4Y E5S E5Y 25S 25Y 34S 34Y)	19R0837	**
11	System board, (10/100 Enet) w/ video buffer, no AGP -- optional to 19R0837 (models 11U A1S A1Y D1S D1Y D2S D2Y E1S E1Y E2S E2P E2Y 41U 41S 41P 41Y 42S 42P 42Y 11S 11P 11Y 14U 14S 14P 14Y 15S 15P 15Y CAU CBU CCU A2S A2Y B1S B1P B1Y E3S E3Y E4S E4Y E5S E5Y 25S 25Y 34S 34Y)	39J7966	**
11	System board, (10/100 Enet) w/ video buffer, no AGP -- optional to 19R0837 (models 11U A1S A1Y D1S D1Y D2S D2Y E1S E1Y E2S E2P E2Y 41U 41S 41P 41Y 42S 42P 42Y 11S 11P 11Y 14U 14S 14P 14Y 15S 15P 15Y CAU CBU CCU A2S A2Y B1S B1P B1Y E3S E3Y E4S E4Y E5S E5Y 25S 25Y 34S 34Y)	41D0949	**
12	2.4GHz Celeron, (models A1S A1Y)	88P7699	**
12	2.6GHz Celeron, (models D1S D1Y)	13R8907	**
12	2.8GHz Celeron, (models E1S E1Y)	13R8963	**
12	Intel Celeron 2.4 GHz (models A2S A2Y)	19R0780	* *
12	Intel Celeron 2.53 GHz (models B1S B1P B1Y)	19R0417	* *
12	2.66GHz Celeron, (models D2S D2Y)	19R0419	**
12	2.8GHz Celeron, (models E2S E2P E2Y E3S E3Y)	19R0421	**
12	2.93GHz Celeron, (models E4S E4Y)	29R6989	**
12	3.06GHz Celeron, (models E5S E5Y)	29R6990	**
12	Intel P4 2.6 GHz (models 41U 41S 41P 41Y 42S 42P 42Y CAU)	73P0574	**
12	Intel P4 2.8 GHz (models s 14U 14S 14P 14Y CBU)	19R2302	**
12	Intel P4 2.8 GHz (models s 12S 12Y)	74P1631	**
12	Intel P4 3.06 GHz (models 22S 22Y)	74P1633	**
12	Intel Prescott P4 2.8 GHz (models 11U 11S 11P 11Y 13S 13P 13Y CCU)	19R0423	**
12	Intel Prescott P4 2.8 GHz (models 15S 15P 15Y CDU)	19R0292	**
12	Intel Prescott P4 3.0 GHz (models 21U 23S 23P 23Y CEU 24U 25S 25Y)	19R0294	**
12	Intel Prescott P4 3.2 GHz (models 31U 32S 32P 32Y CFU 33U 34S 34Y)	19R0296	**
12	Intel Prescott P4 3.4 GHz (models CGU)	29R6991	**
13	Heat sink and fan, Northwood <3.0GHz (models A1S A1Y D1S D1Y E1S E1Y 41U 41S 41P 41Y 42S 42P 42Y CAU 14U 14S 14P 14Y CBU 12S 12Y)	32P4004	**
13	Heat sink and fan, Northwood >=3.0 GHZ and all Prescott (models 11U 21U 31U 11S 11P 11Y 13S 13P 13Y CCU 15S 15P 15Y CDU 23S 23P 23Y CEU 32S 32P 32Y CFU A2S A2Y B1S B1P B1Y 33U CGU 24U 22S 22Y E3S E3Y E4S E4Y E5S E5Y 25S 25Y 34S 34Y)	13R9195	**
13	Heat sink and fan, Northwood >=3.0 GHZ and all Prescott, Dual Heat Pipe -- optional to 13R9195 (models 11U 21U 31U 11S 11P 11Y 13S 13P 13Y CCU 15S 15P 15Y CDU 23S 23P 23Y CEU 32S 32P 32Y CFU A2S A2Y B1S B1P B1Y 33U CGU 24U 22S 22Y E3S E3Y E4S E4Y E5S E5Y 25S 25Y 34S 34Y)	13N2951	**





The FRUs listed in the following table are not illustrated.

8149 FRUs	FRU#	CRU
Retention kit (all models)	89P6740	*
Fan Bracket Assembly >= 3.0Ghz (models 21U 31U 23S 23P 23Y CEU 22S 22Y 32S 32P 32Y CFU 33U CGU 24U 25S 25Y 34S 34Y)	89P6700	*
System board EMC shield kit (all models)	89P4761	*
Hard disk drive mounting bracket assembly (all models)	88P5916	*
Heat Sink, Grease, Heat Pipe (all models)	13R9195	*
Heat Sink, Dual Heat Pipe (all models)	13N2951	*
Bezel kit (all models)	49P4371	*
Cable, dual USB 2.0 (all models)	49P4365	*
Cable, dual USB Cable, Long USB 2.0 (all models)	89P6749	*
Cable, ATA66 1 drop (all models)	88P5967	*
Cable, ATA66 2 drop (all models)	88P5971	*
Cable, Diskette drive (all models)	88P6515	*
Cable, second serial port (all models)	49P4530	*
Cable assembly, power/LED (all models)	37L5092	*
5.25 EMC shield (all models)	19K5548	*
Misc. hardware kit (all models)	88P5965	*
Planar shield (all models)	26K1216	*
Battery, 3.0 V (all models)	33F8354	*
Mouse, optical wheel (models 11U 21U 31U A1S A1Y D1S D1Y D2S D2Y E1S E1Y E2S E2P E2Y 41U 41S 41P 41Y 42S 42P 42Y 11S 11P 11Y 12S 12Y 13S 13P 13Y 14U 14S 14P 14Y 15S 15P 15Y 22S 22Y 23S 23P 23Y 32S 32P 32Y A2S A2Y B1S B1P B1Y 33U 24U E3S E3Y E4S E4Y E5S E5Y 25S 25Y 34S 34Y)	89P5089	*
RJ11 connector adapter (Spain, Ireland) (All "G" models)	60H6043	*
RJ11 connector adapter (Austria) (All "G" models)	60H6045	*
RJ11 connector adapter (Belgium) (All "G" models)	60H6046	*
RJ11 connector adapter (Denmark) (All "G" models)	60H6047	*
RJ11 connector adapter (Norway, Finland) (All "G" models)	60H6048	*
RJ11 connector adapter (France) (All "G" models)	60H6049	*
RJ11 connector adapter (Germany) (All "G" models)	60H6050	*
RJ11 connector adapter (UK, NZ, HK) (All "G", "M", "B", "H" models)	60H6051	*
RJ11 connector adapter (Italy) (All "G" models)	60H6052	*
RJ11 connector adapter (Netherlands) (All "G" models)	60H6053	*
RJ11 connector adapter (Sweden) (All "G" models)	60H6054	*
RJ11 connector adapter (Switzerland) (All "G" models)	60H6055	*

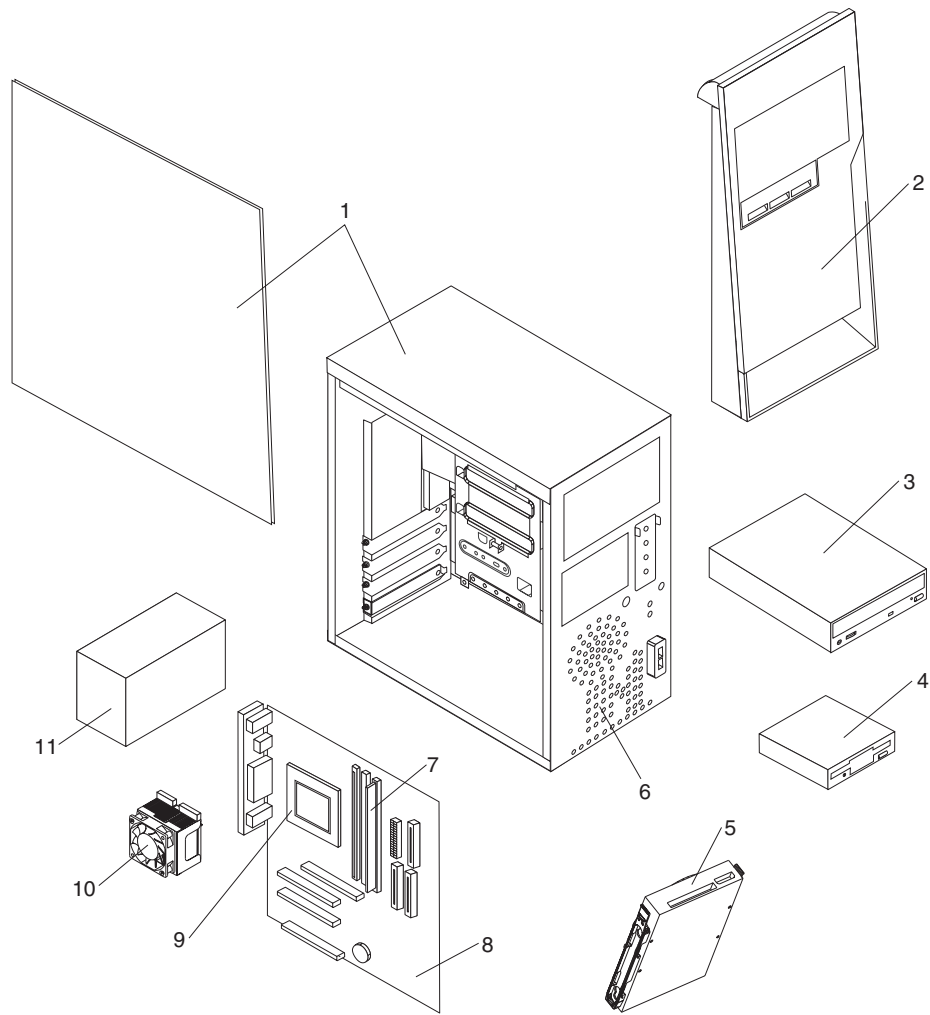
8149 Windows XP Pro Recovery CDs	FRU#	CRU
US (Models 11U 21U 31U 41U 14U 33U 24U)	39J6414	*
SP (models A1S A1Y D1S D1Y D2S D2Y E1S E1Y E2S E2Y 41S 41Y 42S 42Y 11S 11Y 12S 12Y 13S 13Y 14S 14Y 15S 15Y 22S 22Y 23S 23Y 32S 32Y A2S A2Y B1S B1Y E3S E3Y E4S E4Y E5S E5Y 25S 25Y 34S 34Y)	39J6417	*

8149 Windows XP Pro Recovery CDs	FRU#	CRU
BR (models E2P 41P 42P 11P 13P 14P 15P 23P 32P B1P)	39J6419	*

8149 Keyboards (Standard PS/2 Black)	FRU#	CRU
US English (models 11U 21U 31U 41U 14U 33U 24U)	89P8300	*
BR (models E2P 41P 42P 11P 13P 14P 15P 23P 32P B1P)	89P8304	*
SP/LA (models A1S A1Y D1S D1Y D2S D2Y E1S E1Y E2S E2Y 41S 41Y 42S 42Y 11S 11Y 12S 12Y 13S 13Y 14S 14Y 15S 15Y 22S 22Y 23S 23Y 32S 32Y A2S A2Y B1S B1Y E3S E3Y E4S E4Y E5S E5Y 25S 25Y 34S 34Y)	89P8322	*

8149 Power Cords	FRU#	CRU
Power Cord (models 11U 21U 31U A1S D1S D2S E1S E2S E2P 41U 41S 41P 42S 42P 11S 11P 12S 13S 13P 14U 14S 14P 15S 15P 22S 23S 23P 32S 32P CAU CBU CCU CDU CEU CFU CTO-U A2S B1S B1P 33U CGU 24U E3S E4S E5S 25S 34S)	6952301	*
Power Cord (EMEA, LA) (models A1S A1Y D1S D1Y D2S D2Y E1S E1Y E2S E2P E2Y 41S 41P 41Y 42S 42P 42Y 11S 11P 11Y 12S 12Y 13S 13P 13Y 14S 14P 14Y 15S 15P 15Y 22S 22Y 23S 23P 23Y 32S 32P 32Y A2S A2Y B1S B1P B1Y E3S E3Y E4S E4Y E5S E5Y 25S 25Y 34S 34Y)	14F0068	*
Power Cord (APU) (models A1Y D1Y D2Y E1Y E2Y 41Y 42Y 11Y 12Y 13Y 14Y 15Y 22Y 23Y 32Y A2Y B1Y E3Y E4Y E5Y 25Y 34Y)	36L8879	*

# Machine Type 8174



Item #	8174 FRUs	FRU#	CRU
1	Chassis assembly (all models)	74P2256	**
2	Bezel and shield kit (all models)	74P2257	*
3	CD-ROM Drive 48X - Black w/o jack & vol (models 22A 22T 22B 22H 22V 22Q 23K)	40Y8801	**
3	CD-ROM Drive 48X - Black w/o jack & vol (models 22A 22T 22B 22H 22V 22QK 23K)	40Y8805	**
3	CD-ROM Drive 48X - Black w/o jack & vol (models 22A 22T 22B 22H 22V 22Q 23K)	40Y8807	**
3	CD-ROM Drive 48X - Black w/o jack & vol (models 22A 22T 22B 22H 22V 22Q 23K)	40Y8813	**
3	CD-ROM Drive 48X - Black w/o jack & vol (models 22A 22T 22B 22H 22V 22Q 23K)	40Y8929	**
4	Diskette drive, 3.5 1.44 MB (all models)	40Y9107	**
4	Diskette drive, 3.5 1.44 MB (optional to 76H4091 (all models)	40Y8899	**
4	Diskette drive, 3.5 1.44 MB (optional to 76H4091 (all models)	40Y9105	**
5	Hard disk drive, 40 GB EIDE (models 22A 22T 22B 22H 22V 22Q 23K)	40Y8757	*

Item #	8174 FRUs	FRU#	CRU
6	Speaker Asm. Soldered Terminals	00N5151	*
7	256 MB SDRAM (models 22A 22T 22B 22H 22V 22Q)	73P2683	*
8	System board, 10/100 E-net, (models 23K)	19R0703	**
8	System board, (10/100 Enet) w/ video buffer -- optional to 19R0703 (models 23K)	39J7965	**
8	System board, (10/100 Enet) w/ video buffer -- optional to 19R0703 (models 23K)	41D0948	**
8	System board, 10/100 E-net, no AGP (models 22A 22T 22B 22H 22V 22Q)	19R0837	**
8	System board, (10/100 Enet) w/ video buffer, no AGP -- optional to 19R0837 (models 22A 22T 22B 22H 22V 22Q)	39J7966	**
8	System board, (10/100 Enet) w/ video buffer, no AGP -- optional to 19R0837 (models 22A 22T 22B 22H 22V 22Q)	41D0949	**
9	Intel Prescott P4 3.0 GHz (models 22A 22T 22B 22H 22V 22Q 23K)	19R0294	**
10	Heat sink and fan (for Prescott only) (models 22A 22T 22B 22H 22V 22Q 23K)	13R9195	*
10	Heat sink and fan, Dual Heat Pipe -- optional to 13R9195 (for Prescott only) (models 22A 22T 22B 22H 22V 22Q 23K)	13N2951	*
11	Power Supply, 230W, PFC (Acbel) (models 22A 22T 23K)	74P4300	N
11	Power Supply, 230W, China (models 22B 22H 22V 22Q)	74P4301	N

The FRUs listed in the following table are not illustrated.

8174 FRUs	FRU#	CRU
Cable, Diskette drive (all models)	59P8568	*
Cable, audio (all models)	75H9219	*
Cable, IDE (ATA66 1 drop) (all models)	37L4525	*
Cable, IDE (ATA66 2 drop) (all models)	37L5098	*
Planar shield (all models)	26K1216	*
Dual USB 1.1 cable (top channel) (all models)	22P2400	*
Audio cable assembly (ATA) (all models)	49P1933	*
Front panel label kit (all models)	09N6708	*
Access panel (all models)	49P3386	*
Cable, power/LED (all models)	09N6709	*
Screw kit (all models)	49P3387	*
Cable, serial port (all models)	49P4530	*
Bracket, second hardfile mount & 6-32 screw (all models)	74P2254	*
Cable, serial ATA (all models)	88P5927	*
System fan (includes bracket) (models 22A 22T 22B 22H 22V 22Q 23K)	88P8585	*
Battery, 3.0 V (all models)	33F8354	*
Mouse, optical wheel (models 22A 22T 22B 22H 22V 22Q 23K)	89P5089	*
RJ11 connector adapter (Spain, Ireland) (All "G" models)	60H6043	*
RJ11 connector adapter (Austria) (All "G" models)	60H6045	*
RJ11 connector adapter (Belgium) (All "G" models)	60H6046	*
RJ11 connector adapter (Denmark) (All "G" models)	60H6047	*
RJ11 connector adapter (Norway, Finland) (All "G" models)	60H6048	*
RJ11 connector adapter (France) (All "G" models)	60H6049	*
RJ11 connector adapter (Germany) (All "G" models)	60H6050	*
RJ11 connector adapter (UK, NZ, HK) (All "G", "M", "B", "H" models)	60H6051	*
RJ11 connector adapter (Italy) (All "G" models)	60H6052	*
RJ11 connector adapter (Netherlands) (All "G" models)	60H6053	*
RJ11 connector adapter (Sweden) (All "G" models)	60H6054	*
RJ11 connector adapter (Switzerland) (All "G" models)	60H6055	*

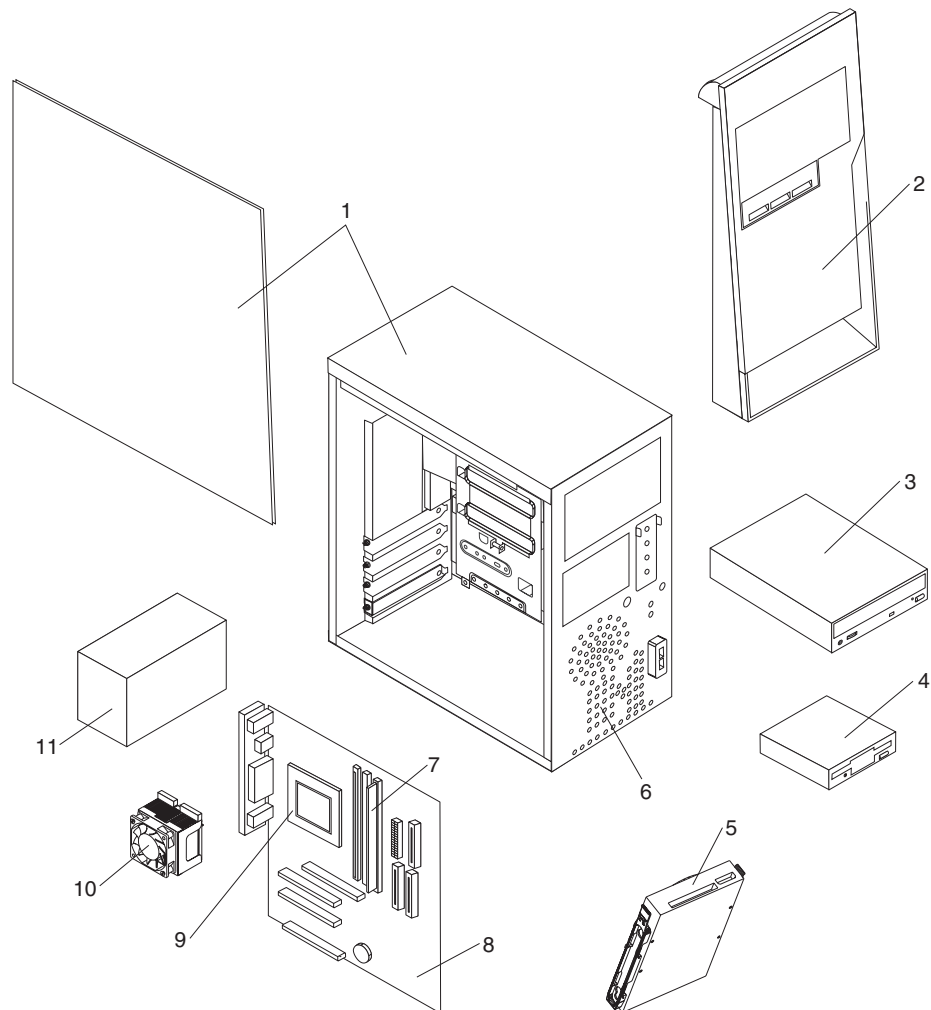
8174 Windows XP Pro Recovery CDs	FRU#	CRU
US (models 22A 22T 22H 22Q)	39J6414	*
TW (models 22V)	30R4820	*
HK (models 22B)	30R4827	*
Korea (models 23K)	30R4806	*

8174 Keyboards (Standard PS/2 Black)	FRU#	CRU
US English (models 22A 22H 22Q)	89P8300	*
Chinese/US (models 22B 22V)	89P8306	*

8174 Keyboards (Standard PS/2 Black)	FRU#	CRU
Korean (models 23K)	89P821	*
Thailand (models 22T)	89P8334	*

8174 Power Cords	FRU#	CRU
Power Cord (models 22A 22T 22V)	6952301	*
Power Cord (EMEA, ANZ, ASEAN Eng, Korea) (models 23K)	13F9978	*
Power Cord (EMEA, ANZ, ASEAN Eng, HK Eng) (models 22H)	14F0032	*
Power Cord (China, HK) (models 22B 22H)	02K0545	*
Power Cord (India) (models 22Q)	02K0545	*

## Machine Type 8175



Item #	8175 FRUs	FRU#	CRU
1	Chassis assembly (all models)	74P2256	**
2	Bezel and shield kit (all models)	74P2257	*

Item #	8175 FRUs	FRU#	CRU
3	CD-ROM Drive 48X - Black w/o jack & vol (models 13B 13H 14B 14H 15K 19C 1AC 1BA 1BT 22C 23C 24A 24T 24B 24H 27K 31B 31H 16V A3J D1V D4Q 41A 41T 43A 43Q 43T 44V 12J 13A 13Q 13T 14Q 14T 16A 16T 1BQ 1BB 1BH 1EA 1ET 1EB 1EH 1HC 1KC 31A 31T D2A D2T D2B D2H 14A D5A D5T 45A 45T 47A 47Q 47T 1LA 1LQ 1LT 1MA 1MQ 1MT 1PA 1PQ 1PT 1QA 1QT A6Q A7Q A8V B1A B2A B2T B3A B3Q B3T B3B B3H D6A D7A D7T D8A D8Q D8T D9V E2V DBB DBH E4A E4Q E4T 51A 51Q 51T 51C 52C 53B 53H DCK E6K)	40Y8801	**
3	CD-ROM Drive 48X - Black w/o jack & vol (models 13B 13H 14B 14H 15K 19C 1AC 1BA 1BT 22C 23C 24A 24T 24B 24H 27K 31B 31H 16V A3J D1V D4Q 41A 41T 43A 43Q 43T 44V 12J 13A 13Q 13T 14Q 14T 16A 16T 1BQ 1BB 1BH 1EA 1ET 1EB 1EH 1HC 1KC 31A 31T D2A D2T D2B D2H 14A D5A D5T 45A 45T 47A 47Q 47T 1LA 1LQ 1LT 1MA 1MQ 1MT 1PA 1PQ 1PT 1QA 1QT A6Q A7Q A8V B1A B2A B2T B3A B3Q B3T B3B B3H D6A D7A D7T D8A D8Q D8T D9V E2V DBB DBH E4A E4Q E4T 51A 51Q 51T 51C 52C 53B 53H DCK E6K)	40Y8805	**
3	CD-ROM Drive 48X - Black w/o jack & vol (models 13B 13H 14B 14H 15K 19C 1AC 1BA 1BT 22C 23C 24A 24T 24B 24H 27K 31B 31H 16V A3J D1V D4Q 41A 41T 43A 43Q 43T 44V 12J 13A 13Q 13T 14Q 14T 16A 16T 1BQ 1BB 1BH 1EA 1ET 1EB 1EH 1HC 1KC 31A 31T D2A D2T D2B D2H 14A D5A D5T 45A 45T 47A 47Q 47T 1LA 1LQ 1LT 1MA 1MQ 1MT 1PA 1PQ 1PT 1QA 1QT A6Q A7Q A8V B1A B2A B2T B3A B3Q B3T B3B B3H D6A D7A D7T D8A D8Q D8T D9V E2V DBB DBH E4A E4Q E4T 51A 51Q 51T 51C 52C 53B 53H DCK E6K)	40Y8807	**
3	CD-ROM Drive 48X - Black w/o jack & vol (models 13B 13H 14B 14H 15K 19C 1AC 1BA 1BT 22C 23C 24A 24T 24B 24H 27K 31B 31H 16V A3J D1V D4Q 41A 41T 43A 43Q 43T 44V 12J 13A 13Q 13T 14Q 14T 16A 16T 1BQ 1BB 1BH 1EA 1ET 1EB 1EH 1HC 1KC 31A 31T D2A D2T D2B D2H 14A D5A D5T 45A 45T 47A 47Q 47T 1LA 1LQ 1LT 1MA 1MQ 1MT 1PA 1PQ 1PT 1QA 1QT A6Q A7Q A8V B1A B2A B2T B3A B3Q B3T B3B B3H D6A D7A D7T D8A D8Q D8T D9V E2V DBB DBH E4A E4Q E4T 51A 51Q 51T 51C 52C 53B 53H DCK E6K)	40Y8813	**
3	CD-ROM Drive 48X - Black w/o jack & vol (models 13B 13H 14B 14H 15K 19C 1AC 1BA 1BT 22C 23C 24A 24T 24B 24H 27K 31B 31H 16V A3J D1V D4Q 41A 41T 43A 43Q 43T 44V 12J 13A 13Q 13T 14Q 14T 16A 16T 1BQ 1BB 1BH 1EA 1ET 1EB 1EH 1HC 1KC 31A 31T D2A D2T D2B D2H 14A D5A D5T 45A 45T 47A 47Q 47T 1LA 1LQ 1LT 1MA 1MQ 1MT 1PA 1PQ 1PT 1QA 1QT A6Q A7Q A8V B1A B2A B2T B3A B3Q B3T B3B B3H D6A D7A D7T D8A D8Q D8T D9V E2V DBB DBH E4A E4Q E4T 51A 51Q 51T 51C 52C 53B 53H DCK E6K)	40Y8929	**
3	DVD-ROM 16X/48X (Black) (models 25V 1DV)	40Y8811	**
3	CD-RW Drive (48X/32X/48X) (models 1CM 25V 29M D3M E1M DAM E3M)	40Y8901	**
3	DVD-ROM/CD-RW Combo Drive (48x\32x\48x\16x) (models 17K 32K 1TK 2AK)	40Y8781	**
3	DVD-ROM/CD-RW Combo Drive (48x\32x\48x\16x) (models 17K 32K 1TK 2AK)	40Y8903	**
4	Diskette drive, 3.5 1.44 MB (all models)	40Y9107	*
4	Diskette drive, 3.5 1.44 MB (all models)	40Y8899	*
4	Diskette drive, 3.5 1.44 MB (all models)	40Y9105	*



Item #	8175 FRUs	FRU#	CRU
5	Hard disk drive, 40 GB EIDE (models 13B 13H 14B 14H 15K 16V 17K 18A 19C 1AC 1BA 1BT 21A 22C 23C 24A 24T 24B 24H 27K 31B 31H A3J D1V D4Q 41A 41T 42Q 43A 43Q 43T 44V 12J 13A 13Q 13T 14Q 14T 16A 16T 1BQ 1BB 1BH 1EA 1ET 1EB 1EH 1FQ 1GQ 1HC 1KC 31A 31T D2A D2T D2B D2H 14A D5A D5T 45A 45T 46Q 47A 47Q 47T 1LA 1LQ 1LT 1MA 1MQ 1MT 1NA 1PA 1PQ 1PT 1QA 1QT 1RQ 1SQ A5Q A6Q A7Q A8V B1A B2A B2T B3A B3Q B3T B3B B3H D6A D7A D7T D8A D8Q D8T D9V E2V DBB DBH E4A E4Q E4T 51A 51Q 51T 51C 52C 53B 53H DCK E6K 1TK 2AK)	40Y8757	*
5	Hard disk drive 80 GB EIDE (models 1CM 25V 29M 1DV D3M E1M DAM E3M)	40Y8758	**
5	Hard disk drive 80 GB Serial ATA (models 32K)	71P7293	**
5	Hard disk drive 80 GB Serial ATA (models 32K)	40Y8761	**
6	Speaker Asm. Soldered Terminals	00N5151	*
7	128 MB SDRAM (models A3J D2A D2T D2B D2H 41A 41T 1EA 1ET 1EB 1EH D5A D5T 45A 45T 1QA 1QT A5Q A6Q B1A B2A B2T D6A D7A D7T DBB DBH)	31P9120	*
7	256 MB SDRAM (models 13B 13H 14B 14H 15K 16V 17K D1V D3M D4Q 42Q 43A 43Q 43T 44V 12J 13A 13Q 13T 14Q 14T 16A 16T 1FQ 1GQ 1HC 1KC E1M 14A 46Q 47A 47Q 47T 1LA 1LQ 1LT 1MA 1MQ 1MT 1RQ 1SQ A7Q A8V B3A B3Q B3T B3B B3H D8A D8Q D8T D9V DAM E2V E3M E4A E4Q E4T E6K 1TK)	31P9121	*
7	512 MB SDRAM (models 1CM)	31P9122	*
7	256 MB SDRAM (models 18A 19C 1AC 1BA 1BT 21A 22C 23C 24A 24T 24B 24H 25V 27K 31B 31H 32K 1BQ 1BB 1BH 1DV 31A 31T 1NA 1PA 1PQ 1PT 51A 51Q 51T 51C 52C 53B 53H 2AK)	73P2683	*
7	512 MB SDRAM (models 29M)	73P2684	*
8	System board, 10/100 E-net (models 15K 17K 1CM 27K 29M 32K 16V 25V D1V 44V 16A 16T 1DV A8V D9V E2V 53B 53H 1TK 2AK)	19R0703	**
8	System board, (10/100 Enet) w/ video buffer -- optional to 19R0703 (models 15K 17K 1CM 27K 29M 32K 16V 25V D1V 44V 16A 16T 1DV A8V D9V E2V 53B 53H 1TK 2AK)	39J7965	**
8	System board, (10/100 Enet) w/ video buffer -- optional to 19R0703 (models 15K 17K 1CM 27K 29M 32K 16V 25V D1V 44V 16A 16T 1DV A8V D9V E2V 53B 53H 1TK 2AK)	41D0948	**
8	System board, 10/100 E-net, no AGP (models 13B 13H 14B 14H 18A 19C 1AC 1BA 1BT 21A 22C 23C 24A 24T 24B 24H 31B 31H A3J D2A D2T D2B D2H D4Q 41A 41T 42Q 43A 43Q 43T 12J 13A 13Q 13T 14Q 14T 1BQ 1BB 1BH 1EA 1ET 1EB 1EH 1FQ 1GQ 1HC 1KC 31A 31T 14A D3M E1M D5A D5T 45A 45T 46Q 47A 47Q 47T 1LA 1LQ 1LT 1MA 1MQ 1MT 1NA 1PA 1PQ 1PT 1QA 1QT 1RQ 1SQ A5Q A6Q A7Q B1A B2A B2T B3A B3Q B3T B3B B3H D6A D7A D7T D8A D8Q D8T DAM E3M DBB DBH E4A E4Q E4T 51A 51Q 51T 51C 52C DCK E6K)	19R0837	**

Item #	8175 FRUs	FRU#	CRU
8	System board, (10/100 Enet) w/ video buffer, no AGP -- optional to 19R0837 (models 13B 13H 14B 14H 18A 19C 1AC 1BA 1BT 21A 22C 23C 24A 24T 24B 24H 31B 31H A3J D2A D2T D2B D2H D4Q 41A 41T 42Q 43A 43Q 43T 12J 13A 13Q 13T 14Q 14T 1BQ 1BB 1BH 1EA 1ET 1EB 1EH 1FQ 1GQ 1HC 1KC 31A 31T 14A D3M E1M D5A D5T 45A 45T 46Q 47A 47Q 47T 1LA 1LQ 1LT 1MA 1MQ 1MT 1NA 1PA 1PQ 1PT 1QA 1QT 1RQ 1SQ A5Q A6Q A7Q B1A B2A B2T B3A B3Q B3T B3B B3H D6A D7A D7T D8A D8Q D8T DAM E3M DBB DBH E4A E4Q E4T 51A 51Q 51T 51C 52C DCK E6K)	39J7966	**
8	System board, (10/100 Enet) w/ video buffer, no AGP -- optional to 19R0837 (models 13B 13H 14B 14H 18A 19C 1AC 1BA 1BT 21A 22C 23C 24A 24T 24B 24H 31B 31H A3J D2A D2T D2B D2H D4Q 41A 41T 42Q 43A 43Q 43T 12J 13A 13Q 13T 14Q 14T 1BQ 1BB 1BH 1EA 1ET 1EB 1EH 1FQ 1GQ 1HC 1KC 31A 31T 14A D3M E1M D5A D5T 45A 45T 46Q 47A 47Q 47T 1LA 1LQ 1LT 1MA 1MQ 1MT 1NA 1PA 1PQ 1PT 1QA 1QT 1RQ 1SQ A5Q A6Q A7Q B1A B2A B2T B3A B3Q B3T B3B B3H D6A D7A D7T D8A D8Q D8T DAM E3M DBB DBH E4A E4Q E4T 51A 51Q 51T 51C 52C DCK E6K)	41D0949	**
9	Intel Celeron 2.4 GHz (models A3J)	88P7699	**
9	Intel Celeron 2.6 GHz (models D1V D2A D2T D2B D2H D3M D4Q D5A D5T)	13R8907	**
9	Intel Celeron 2.8 GHz (models E1M)	13R8963	**
9	Intel Celeron 2.4 GHz (models A5Q A6Q A7Q A8V)	19R0780	* *
9	Intel Celeron 2.53 GHz (models B1A B2A B2T B3A B3Q B3T B3B B3H)	19R0417	* *
9	Intel Celeron 2.66 GHz (models D6A D7A D7T D8A D8Q D8T D9V DAM DBB DBH DCK)	19R0419	* *
9	Intel Celeron 2.8 GHz (models E2V E3M E6K)	19R0421	* *
9	Intel Celeron 2.93 GHz (models E4A E4Q E4T)	29R6989	* *
9	Intel Celeron 3.06 GHz (models)	29R6990	* *
9	Intel P4 2.6 GHz (models 41A 41T 42Q 43A 43Q 43T 44V 45A 45T 46Q 47A 47Q 47T)	73P0574	**
9	Intel P4 2.8 GHz (models 13B 13H 13A 13Q 13T 1EA 1ET 1EB 1EH 1FQ 1LA 1LQ 1LT 1QA 1QT 1RQ)	19R2302	**
9	Intel P4 2.8 GHz (models 12J)	74P1631	**
9	Intel Prescott P4 2.8 GHz (models 14B 14H 15K 16V 17K 14Q 14T 16A 16T 1GQ 1HC 1KC 14A 1MA 1MQ 1MT 1SQ 1TK)	19R0423	**
9	Intel Prescott P4 2.8 GHz (models 18A 19C 1AC 1BA 1BT 1CM 1BQ 1BB 1BH 1DV 1NA 1PA 1PQ 1PT)	19R0292	**
9	Intel Prescott P4 3.0 GHz (models 21A 22C 23C 24A 24T 24B 24H 25V 27K 29M 2AK)	19R0294	**
9	Intel Prescott P4 3.2 GHz (models 31B 31H 32K 31A 31T)	19R0296	**
9	Intel Prescott P4 3.4 GHz (models 51A 51Q 51T 51C 52C 53B 53H)	29R6991	**
10	Heat sink and fan, Northwood <3.0GHz (models E4A E4Q E4T 13B 13H 14B 14H 15K 16V 17K A3J D1V D2A D2T D2B D2H D3M D4Q 41A 41A 41T 42Q 43A 43Q 43T 44V 12J 13A 13Q 13T 1EA 1ET 1EB 1EH 1FQ E1M D5A D5T 45A 45T 46Q 47A 47Q 47T 1LA 1LQ 1LT 1QA 1QT 1RQ)	32P4004	**

Item #	8175 FRUs	FRU#	CRU
10	Heat sink and fan, Northwood >=3.0 GHZ and all Prescott (models 18A 19C 1AC 1BA 1BT 1CM 21A 22C 23C 24A 24T 24B 24H 25V 27K 29M 31B 31H 32K 14Q 14T 16A 16T 1GQ 1HC 1KC 1BQ 1BB 1BH 1DV 31A 31T 14A 1MA 1MQ 1MT 1SQ 1NA 1PA 1PQ 1PT A5Q A6Q A7Q A8V B1A B2A B2T B3A B3Q B3T B3B B3H D6A D7A D7T D8A D8Q D8T D9V DAM E2V E3M DBB DBH 51A 51Q 51T 51C 52C 53B 53H DCK E6K 1TK 2AK)	13R9195	**
10	Fansink, Northwood >=3.0 GHZ and all Prescott, Dual Heat Pipe -- optional to 13R9195 (models 18A 19C 1AC 1BA 1BT 1CM 21A 22C 23C 24A 24T 24B 24H 25V 27K 29M 31B 31H 32K 14Q 14T 16A 16T 1GQ 1HC 1KC 1BQ 1BB 1BH 1DV 31A 31T 14A 1MA 1MQ 1MT 1SQ 1NA 1PA 1PQ 1PT A5Q A6Q A7Q A8V B1A B2A B2T B3A B3Q B3T B3B B3H D6A D7A D7T D8A D8Q D8T D9V DAM E2V E3M DBB DBH 51A 51Q 51T 51C 52C 53B 53H DCK E6K 1TK 2AK)	13N2951	**
11	230W Power Supply - AcBel PFC (models 15K 17K 18A 1BA 1BT 1CM 21A 24A 24T 27K 29M 32K A3J D2A D2T D3M D4Q 41A 41T 42Q 43A 43Q 43T 12J 13A 13Q 13T 14Q 14T 16A 16T 1BQ 1EA 1ET 1FQ 1GQ 31A 31T E1M 14A D5A D5T 45A 45T 46Q 47A 47Q 47T 1LA 1LQ 1LT 1MA 1MQ 1MT 1NA 1PA 1PQ 1PT 1QA 1QT 1RQ 1SQ A5Q A6Q A7Q B1A B2A B2T B3A B3Q B3T D6A D7A D7T D8A D8Q D8T DAM E3M E4A E4Q E4T 51A 51Q 51T DCK E6K 1TK 2AK)	74P4300	N
11	230W Power Supply - AcBel China version (models 13B 13H 14B 14H 16V 19C 1AC 22C 23C 24B 24H 25V 31B 31H D1V D2B D2H 44V 1BB 1BH 1DV 1EB 1EH 1HC 1KC A8V B3B B3H D9V E2V DBB DBH 51C 52C 53B 53H)	74P4301	N

The FRUs listed in the following table are not illustrated.

8175 FRUs	FRU#	CRU
Cable, Diskette drive (all models)	59P8568	*
Cable, audio (all models)	75H9219	*
Cable, IDE (ATA66 1 drop) (all models)	37L4525	*
Cable, IDE (ATA66 2 drop) (all models)	37L5098	*
Planar shield (all models)	26K1216	*
Dual USB 1.1 cable (top channel) (all models)	22P2400	*
Audio cable assembly (ATA) (all models)	49P1933	*
Front panel label kit (all models)	09N6708	*
Access panel (all models)	49P3386	*
Cable, power/LED (all models)	09N6709	*
Screw kit (all models)	49P3387	*
Cable, serial port (all models)	49P4530	*
Bracket, second hardfile mount & 6-32 screw (all models)	74P2254	*
Cable, serial ATA (all models)	88P5927	*
System fan (includes bracket) (models 21A 22C 23C 24A 24T 24B 24H 25V 27K 29M 31B 31H 32K 31A 31T 51A 51Q 51T 51C 52C 53B 53H 2AK)	88P8585	*
Battery, 3.0 V (all models)	33F8354	*
2 Audio Front Panel (models 1CM 25V 29M)	49P1750	*
Mouse, optical wheel (models 13B 13H 14B 14H 15K 16V 17K 18A 19C 1AC 1BA 1BT 1CM 21A 22C 23C 24A 24T 24B 24H 25V 27K 29M 31B 31H 32K A3J D1V D2A D2T D2B D2H D3M D4Q 41A 41T 42Q 43A 43Q 43T 44V 12J 13A 13Q 13T 14Q 14T 16A 16T 1BQ 1BB 1BH 1DV 1EA 1ET 1EB 1EH 1FQ 1GQ 1HC 1KC 31A 31T E1M 14A D5A D5T 45A 45T 46Q 47A 47Q 47T 1LA 1LQ 1LT 1MA 1MQ 1MT 1NA 1PA 1PQ 1PT 1QA 1QT 1RQ 1SQ A5Q A6Q A7Q A8V B1A B2A B2T B3A B3Q B3T B3B B3H D6A D7A D7T D8A D8Q D8T D9V DAM E2V E3M DBB DBH E4A E4Q E4T 51A 51Q 51T 51C 52C 53B 53H)	89P5089	*
PCI Modem Card (Soft), ATX (models 1CM 29M D3M E1M DAM E3M 51A 51Q 51T 51C 52C 53B 53H E6K 1TK)	22P7943	*
64MB, Nvidia GeForce MX 440 (VGA) ATX (models 1TK)	73P0715	*
Speakers, Infinity Active T1 (Black)(models 1CM 29M 25V D3M E1M DAM E3M E6K 1TK)	25P4726	*
Speaker Power brick - Taiwan (models 25V)	03R0338	*
Speaker Power brick - ANZ (models 1CM 29M D3M E1M DAM E3M)	25P5705	*
Speaker Power brick -Korean (models E6K 1TK)	88P7687	*
RJ11 connector adapter (Spain, Ireland) (All "G" models)	60H6043	*
RJ11 connector adapter (Austria) (All "G" models)	60H6045	*
RJ11 connector adapter (Belgium) (All "G" models)	60H6046	*
RJ11 connector adapter (Denmark) (All "G" models)	60H6047	*
RJ11 connector adapter (Norway, Finland) (All "G" models)	60H6048	*
RJ11 connector adapter (France) (All "G" models)	60H6049	*
RJ11 connector adapter (Germany) (All "G" models)	60H6050	*
RJ11 connector adapter (UK, NZ, HK) (All "G", "M", "B", "H" models)	60H6051	*
RJ11 connector adapter (Italy) (All "G" models)	60H6052	*
RJ11 connector adapter (Netherlands) (All "G" models)	60H6053	*

8175 FRUs	FRU#	CRU
RJ11 connector adapter (Sweden) (All "G" models)	60H6054	*
RJ11 connector adapter (Switzerland) (All "G" models)	60H6055	*

8175 Windows XP Home Recovery CDs	FRU#	CRU
US (models 1CM 29M D3M 41A 41T 1EA 1ET 1EH E1M B1A D6A DAM E3M 51A 51Q 51T)	39J6250	*
SC (models 1AC 23C 1KC 51C)	30R4777	*
TW (models 25V)	30R4784	*
HK (models 1EB)	27K6746	*
KO (models 15K 17K 27K 32K DCK E6K 1TK 2AK)	30R4770	*

8175 Windows XP Pro Recovery CDs	FRU#	CRU
US (models 13H 14H 18A 1BA 1BT 21A 24A 24T 24H 31H D2A D2T D2H 43A 43T 13A 13T 14T 16A 16T 1BH 31A 31T 14A D4Q 42Q 43Q 13Q 14Q 1BQ A7Q B2A B2T B3A B3Q B3T B3H D7A D7T D8A D8Q D8T DBH E4A E4Q E4T 53H)	39J6414	*
JP (models A3J 12J)	30R4834	*
TW (models 16V D1V 44V 1DV A8V D9V E2V)	30R4820	*
HK (models 13B 14B 24B 31B D2B 1BB B3B DBB 53B)	30R4827	*

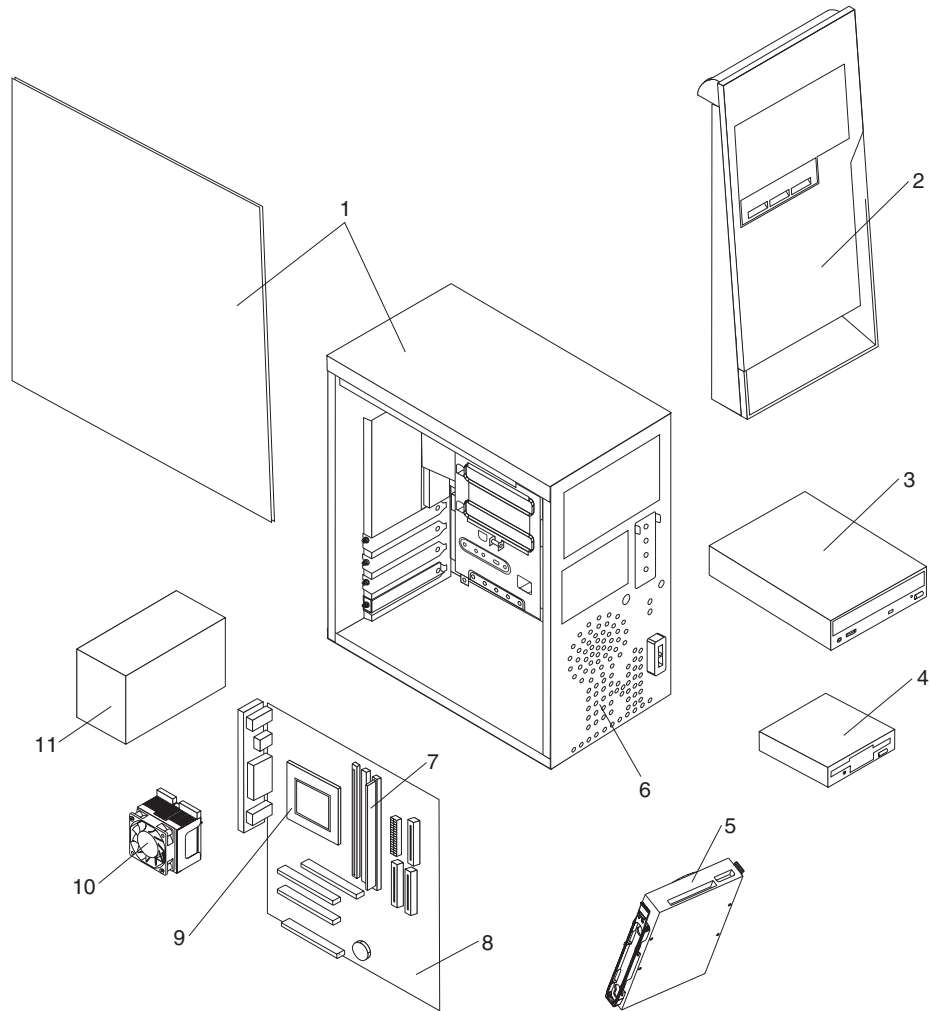
8175 Keyboards (Productivity USB)	FRU#	CRU
Korean (models E6K 1TK 2AK)	89P8821	*

8175 Keyboards (Standard PS/2 Black)	FRU#	CRU
US English (models 13H 14H 18A 19C 1AC 1BA 1CM 21A 22C 23C 24A 24H 29M 31H D2A D2H D3M D4Q 41A 42Q 43A 43Q 13A 13Q 14Q 16A 1BQ 1BH 1EA 1EH 1FQ 1GQ 1HC 1KC 31A E1M 14A D5A 45A 46Q 47A 47Q 1LA 1LQ 1MA 1MQ 1NA 1PA 1PQ 1QA 1RQ 1SQ A5Q A6Q A7Q B1A B2A B3A B3Q B3H D6A D7A D8A D8Q DAM E3M DBH E4A E4Q 51A 51Q 51C 52C 53H)	89P8300	*
Chinese/US (models 13B 14B 16V 24B 25V 31B D1V D2B 44V 1BB 1DV 1EB A8V B3B D9V E2V DBB 53B)	89P8306	*
Japanese (models A3J 12J)	89P8320	*
Korean (models 15K 17K 27K 32K DCK)	89P8321	*
Thailand (models 1BT 24T D2T 41T 43T 13T 14T 16T 1ET 31T D5T 45T 47T 1LT 1MT 1PT 1QT B2T B3T D7T D8T E4T 51T)	89P8334	*

8175 Power Cords	FRU#	CRU
Power Cord (models 16V 18A 1BA 1BT 21A 24A 24T 25V D1V D2A D2T 41A 41T 43A 43T 44V 13A 13T 14T 16A 16T 1DV 1EA 1ET 31A 31T 14A D5A D5T 45A 45T 47A 47T 1LA 1LT 1MA 1MT 1NA 1PA 1PT 1QA 1QT A8V B1A B2A B2T B3A B3T D6A D7A D7T D8A D8T D9V E2V E4A E4T 51A 51T)	6952301	*
Power Cord (ANZ) (models 1CM 29M D3M E1M DAM E3M)	13F9939	*
Power Cord (EMEA, ANZ, ASEAN Eng, Korea) (models 15K 17K 27K 32K DCK E6K 1TK 2AK)	13F9978	*
Power Cord (EMEA, ANZ, ASEAN Eng, HK Eng) (models 13H 14H 24H 31H D2H 1BH 1EH B3H DBH 53H)	14F0032	*

8175 Power Cords	FRU#	CRU
Power Cord (China, HK) (models 13B 13H 14B 14H 19C 1AC 22C 23C 24B 24H 31B 31H D2B D2H 1BB 1BH 1EB 1EH 1HC 1KC B3B B3H DBB DBH 51C 52C 53B 53H)	02K0545	*
Power Cord (India) (models D4Q 42Q 43Q 13Q 14Q 1BQ 1FQ 1GQ 46Q 47Q 1LQ 1MQ 1PQ 1RQ 1SQ A5Q A6Q A7Q B3Q D8Q E4Q 51Q)	49P2078	*

## Machine Type 8176



Item #	8176 FRUs	FRU#	CRU
1	Chassis assembly (all models)	74P2256	**
2	Bezel and shield kit (all models)	74P2257	*
3	CD-ROM Drive 48X - Black w/o jack & vol (models D3B D3H)	40Y8801	**
3	CD-ROM Drive 48X - Black w/o jack & vol (models D3B D3H)	40Y8805	**
3	CD-ROM Drive 48X - Black w/o jack & vol (models D3B D3H)	40Y8807	**
3	CD-ROM Drive 48X - Black w/o jack & vol (models D3B D3H)	40Y8813	**
3	CD-ROM Drive 48X - Black w/o jack & vol (models D3B D3H)	40Y8929	**
3	DVD-ROM 16X/48X (Black) (models 12C D1C 22B D2C)	40Y8811	**

Item #	8176 FRUs	FRU#	CRU
3	CD-RW Drive (48X/32X/48X) (models 22B)	40Y8901	**
3	DVD-ROM/CD-RW Combo Drive (48x\32x\48x\16x) (models 21C 13C 32C 51C 52C)	40Y8781	**
3	4DVD-ROM/CD-RW Combo Drive (48x\32x\48x\16x) (models 21C 13C 32C 51C 52C)	40Y8903	**
4	Diskette drive, 3.5 1.44 MB (all models)	40Y9107	*
4	Diskette drive, 3.5 1.44 MB (all models)	40Y8899	*
4	Diskette drive, 3.5 1.44 MB (all models)	40Y9105	*
5	Hard disk drive, 40 GB EIDE (models 22B D3B D3H)	40Y8757	*
5	Hard disk drive, 80 GB EIDE (models D1C 13C D2C)	40Y8758	*
5	Hard disk drive, 120 GB EIDE (models 21C 32C 51C 52C)	40Y8759	*
5	Hard disk drive, 80 GB SATA (models 11C 12C 21C)	71P7293	**
5	Hard disk drive, 80 GB SATA (models 11C 12C 21C)	40Y8761	**
6	Speaker Asm. Soldered Terminals	00N5151	*
7	128 MB SDRAM (models D1C D3B D3H)	31P9120	*
7	256 MB SDRAM (models 12C 13C D2C)	31P9121	*
7	256 MB SDRAM (models 21C 22B 32C 51C 52C)	73P2683	*
8	System board, 10/100 E-net (models 12C 21C 13C 32C 51C 52C)	19R0703	**
8	System board, (10/100 Enet) w/ video buffer -- optional to 19R0703 (models 12C 21C 13C 32C 51C 52C)	39J7965	**
8	System board, (10/100 Enet) w/ video buffer -- optional to 19R0703 (models 12C 21C 13C 32C 51C 52C)	41D0948	**
8	System board, 10/100 E-net, no AGP (models D1C 22B D2C D3B D3H)	19R0837	**
8	System board, (10/100 Enet) w/ video buffer, no AGP -- optional to 19R0837 (models D1C 22B D2C D3B D3H)	39J7966	**
8	System board, (10/100 Enet) w/ video buffer, no AGP -- optional to 19R0837 (models D1C 22B D2C D3B D3H)	41D0949	**
9	Intel P4 2.66 GHz (models D2C D3B D3H)	19R0419	**
9	Intel P4 2.6 GHz (models D1C)	73P0574	**
9	Intel P4 2.8 GHz (models 12C)	19R2302	**
9	Intel Prescott P4 2.8 GHz (models 13C)	19R0423	**
9	Intel Prescott P4 3.0 GHz (models 21C 22B)	19R0294	**
9	Intel Prescott P4 3.2 GHz (models 32C)	19R0296	**
9	Intel Prescott P4 3.4 GHz (models 51C 52C)	29R6991	**
10	Heat sink and fan, Northwood <3.0GHz (models 12C D1C)	32P4004	**
10	Heat sink and fan, Northwood >=3.0 GHZ and all Prescott (models 21C 13C 22B 32C D2C D3B D3H 51C 52C)	13R9195	**
10	Heat sink and fan, Northwood >=3.0 GHZ and all Prescott, Dual Heat Pipe -- optional to 13R9195 (models 21C 13C 22B 32C D2C D3B D3H 51C 52C)	13N2951	**
11	230W Power Supply - AcBel China version (models 12C 21C D1C 13C 22B 32C D2C D3B D3H 51C 52C)	74P4301	N



The FRUs listed in the following table are not illustrated.

8176 FRUs	FRU#	CRU
Cable, Diskette drive (all models)	59P8568	*
Cable, audio (all models)	75H9219	*
Cable, IDE (ATA66 1 drop) (all models)	37L4525	*
Cable, IDE (ATA66 2 drop) (all models)	37L5098	*
Dual USB 1.1 cable (top channel) (all models)	22P2400	*
Audio cable assembly (ATA) (all models)	49P1933	*
Front panel label kit (all models)	09N6708	*
Access panel (all models)	49P3386	*
Cable, power/LED (all models)	09N6709	*
Screw kit (all models)	49P3387	*
Cable, serial port (all models)	49P4530	*
Bracket, second hardfile mount & 6-32 screw (all models)	74P2254	*
Cable, serial ATA (all models)	88P5927	*
Planar shield (all models)	26K1216	*
System fan (includes bracket) (models 21C 22B 32C 51C 52C)	88P8585	*
2 Audio Front Panel (models 12C 21C D1C 13C 22B 32C D2C 51C 52C)	49P1750	*
Battery, 3.0 V (all models)	33F8354	*
Mouse, optical wheel (models 12C 21C D1C 13C 22B 32C D2C D3B D3H 51C 52C)	89P5089	*
PCI Modem Card (Soft), ATX (models 12C 21C D1C 13C 22B 32C D2C 51C 52C)	22P7943	*
64MB, Nvidia GeForce MX 440 (VGA) ATX (models 21C 32C 51C)	73P0715	*
ATI RADEON 9600 (models 52C)	88P6084	*
Speakers, Infinity Active T1 (Black)(models 12C 21C D1C 13C 22B 32C D2C 51C 52C)	25P4726	*
Speaker Power brick - UK, Hong Kong (3 prong) (models 22B)	25P5703	*
Speaker Power brick - China, Hong Kong (newer 2 prong) (models 12C 21C D1C 13C 22B 32C D2C 51C 52C)	10K2597	*
RJ11 connector adapter (Spain, Ireland) (All "G" models)	60H6043	*
RJ11 connector adapter (Austria) (All "G" models)	60H6045	*
RJ11 connector adapter (Belgium) (All "G" models)	60H6046	*
RJ11 connector adapter (Denmark) (All "G" models)	60H6047	*
RJ11 connector adapter (Norway, Finland) (All "G" models)	60H6048	*
RJ11 connector adapter (France) (All "G" models)	60H6049	*
RJ11 connector adapter (Germany) (All "G" models)	60H6050	*
RJ11 connector adapter (UK, NZ, HK) (All "G", "M", "B", "H" models)	60H6051	*
RJ11 connector adapter (Italy) (All "G" models)	60H6052	*
RJ11 connector adapter (Netherlands) (All "G" models)	60H6053	*
RJ11 connector adapter (Sweden) (All "G" models)	60H6054	*
RJ11 connector adapter (Switzerland) (All "G" models)	60H6055	*

8176 Windows XP Home Recovery CDs	FRU#	CRU
SC (models 12C 21C 13C 32C 51C 52C)	30R4777	*



<b>8176 Windows XP Home Recovery CDs</b>	<b>FRU#</b>	<b>CRU</b>
HK (models 22B)	27K6746	*

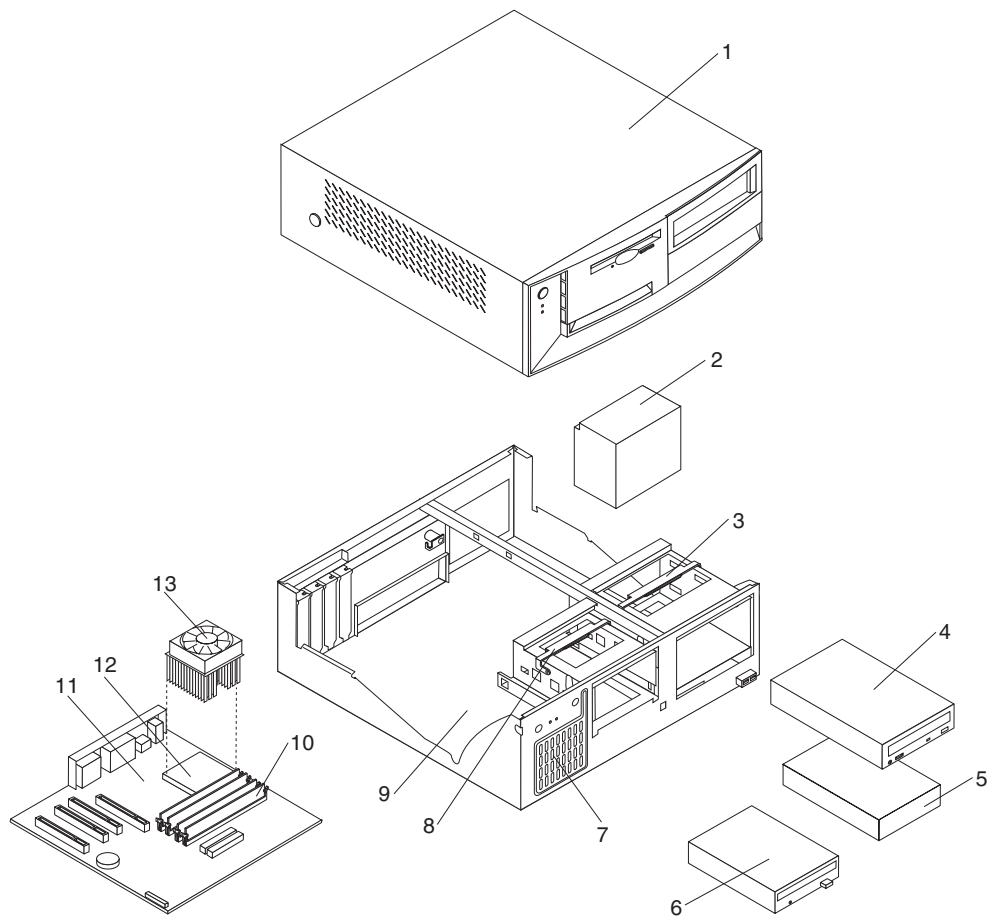
<b>8176 Windows XP Pro Recovery CDs</b>	<b>FRU#</b>	<b>CRU</b>
US/UK/AP/TH (models D3H)	39J6414	*
HK (models D3B)	30R4827	*

<b>8176 Keyboards (Preferred Pro PS/2 Fullsize)</b>	<b>FRU#</b>	<b>CRU</b>
US English (models D3H)	89P8300	*
Chinese/US (models D3B)	89P8807	*

<b>8176 Keyboards (Productivity USB)</b>	<b>FRU#</b>	<b>CRU</b>
US English (models 12C 21C D1C 13C 32C D2C 51C 52C)	89P8800	*
Chinese/US (models 22B)	89P8807	*

<b>8176 Power Cords</b>	<b>FRU#</b>	<b>CRU</b>
Power Cord (EMEA,ANZ,ASEAN,Eng,HK Eng) (models D3H)	14F0032	*
Power Cord (China, HK) (models 12C 21C D1C 13C 22B 32C D2C D3B D3H 51C 52C)	02K0545	*

# Machine Type 8177



Item #	8177 FRUs	FRU#	CRU
1	Top cover assembly (all models)	88P5962	**
2	230W Power Supply - AcBel PFC (models 21M 21A E3U D1U A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG B1U D3U E4U E4G 33G 51G 52G 7FG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	74P4300	N
2	230W Power Supply - AcBel China version (models 11S 21C 21B 21H 21V 22S A1S D4S 12S D2S A1Y D2P D2Y D4P D4Y E1S E1P E1Y 12Y 21Q 22P 22Y B1S B1P E3S E6S E6Y 26S 26Y 34S 34Y)	74P4301	N
3	Pivot lock, 5.25 DASD (all models)	09N5747	**
4	CD-ROM Drive 48X - Black w/o jack & vol (models 21M 21A 21C 21B 21H 21V E3U D1U A3G B1G D3G E2G 11G 13G 16G 17G 21Q 23G 25G 32G 72G 74G 75G 76G 77G 78G 79G 7AG 7DG A2G A3U 21T B1U B1S B1P D3U E3S E4U E4G 33G 51G 7FG 7HG 7JG E7G)	40Y8801	*
4	CD-ROM Drive 48X - Black w/o jack & vol (models 21M 21A 21C 21B 21H 21V E3U D1U A3G B1G D3G E2G 11G 13G 16G 17G 21Q 23G 25G 32G 72G 74G 75G 76G 77G 78G 79G 7AG 7DG A2G A3U 21T B1U B1S B1P D3U E3S E4U E4G 33G 51G 7FG 7HG 7JG E7G)	40Y8805	*
4	CD-ROM Drive 48X - Black w/o jack & vol (models 21M 21A 21C 21B 21H 21V E3U D1U A3G B1G D3G E2G 11G 13G 16G 17G 21Q 23G 25G 32G 72G 74G 75G 76G 77G 78G 79G 7AG 7DG A2G A3U 21T B1U B1S B1P D3U E3S E4U E4G 33G 51G 7FG 7HG 7JG E7G)	40Y8807	*

Item #	8177 FRUs	FRU#	CRU
4	CD-ROM Drive 48X - Black w/o jack & vol (models 21M 21A 21C 21B 21H 21V E3U D1U A3G B1G D3G E2G 11G 13G 16G 17G 21Q 23G 25G 32G 72G 74G 75G 76G 77G 78G 79G 7AG 7DG A2G A3U 21T B1U B1S B1P D3U E3S E4U E4G 33G 51G 7FG 7HG 7JG E7G)	40Y8813	*
4	CD-ROM Drive 48X - Black w/o jack & vol (models 21M 21A 21C 21B 21H 21V E3U D1U A3G B1G D3G E2G 11G 13G 16G 17G 21Q 23G 25G 32G 72G 74G 75G 76G 77G 78G 79G 7AG 7DG A2G A3U 21T B1U B1S B1P D3U E3S E4U E4G 33G 51G 7FG 7HG 7JG E7G)	40Y8929	*
4	DVD-ROM 16X/48X (Black) (models 15G 24G 31G 73G 7BG 7CG 7EG 52G 7KG 7LG 7MG 7NG)	40Y8811	*
5	Hard disk drive, 40 GB EIDE (models 21M 21A 21C 21B 21H 21V A1S D4S E3U 12S D1U D2S A1Y A3G B1G D2P D2Y D3G D4P D4Y E1S E1P E1Y E2G 11G 12Y 13G 14G 16G 17G 21Q 23G 25G 32G 72G 74G 75G 76G 77G 78G 79G 7AG 7DG A2G A3U 21T B1U B1S B1P D3U E3S E4U E4G 33G 51G 7FG 7HG 7JG E6S E6Y E7G 7LG 7MG 7NG)	40Y8757	*
5	Hard disk drive, 80 GB EIDE (models 11S 22S 15G 22P 22Y 24G 31G 73G 7BG 7CG 7EG 52G 7KG 26S 26Y 34S 34Y)	40Y8758	*
6	Diskette drive, 3.5 1.44 MB (models 11S 21M 21A 21C 21B 21H 21V 22S 13G 15G 16G 21Q 22P 22Y 24G 25G 31G 32G 73G 7AG 7BG 7CG 7EG CTO-U CTO-G 21T A1S D4S E3U 12S D1U D2S A1Y A3G B1G D2P D2Y D3G D4P D4Y E1S E1P E1Y E2G 11G 12Y 14G 17G 23G 72G 74G 75G 76G 77G 78G 79G 7DG A2G A3U B1U B1S B1P D3U E3S E4U E4G 33G 51G 52G 7FG 7HG 7JG 7KG E6S E6Y 26S 26Y 34S 34Y E7G 7LG 7MG 7NG)	40Y9107	**
6	Diskette drive, 3.5 1.44 MB (models 11S 21M 21A 21C 21B 21H 21V 22S 13G 15G 16G 21Q 22P 22Y 24G 25G 31G 32G 73G 7AG 7BG 7CG 7EG CTO-U CTO-G 21T A1S D4S E3U 12S D1U D2S A1Y A3G B1G D2P D2Y D3G D4P D4Y E1S E1P E1Y E2G 11G 12Y 14G 17G 23G 72G 74G 75G 76G 77G 78G 79G 7DG A2G A3U B1U B1S B1P D3U E3S E4U E4G 33G 51G 52G 7FG 7HG 7JG 7KG E6S E6Y 26S 26Y 34S 34Y E7G 7LG 7MG 7NG)	40Y8899	**
6	Diskette drive, 3.5 1.44 MB (models 11S 21M 21A 21C 21B 21H 21V 22S 13G 15G 16G 21Q 22P 22Y 24G 25G 31G 32G 73G 7AG 7BG 7CG 7EG CTO-U CTO-G 21T A1S D4S E3U 12S D1U D2S A1Y A3G B1G D2P D2Y D3G D4P D4Y E1S E1P E1Y E2G 11G 12Y 14G 17G 23G 72G 74G 75G 76G 77G 78G 79G 7DG A2G A3U B1U B1S B1P D3U E3S E4U E4G 33G 51G 52G 7FG 7HG 7JG 7KG E6S E6Y 26S 26Y 34S 34Y E7G 7LG 7MG 7NG)	40Y9105	**
7	Speaker assembly (models 21M 21A 21T 21C 21B 21H 21V)	00N5151	*
8	Pivot lock, 3.5 Diskette drive (all models)	09N5748	**
9	Chassis/top cover kit (all models)	88P5963	**
10	128 MB SDRAM (models A1S D4S D2S A1Y D2P D2Y D4P D4Y)	31P9120	*
10	256 MB SDRAM (models 11S E3U 12S D1U A3G B1G D3G E1S E1P E1Y E2G 11G 12Y 13G 14G 17G 72G 73G 74G 75G 76G 77G 78G 79G 7AG A2G A3U B1U B1S B1P D3U E3S E4U E4G 7FG E7G 7LG 7MG 7NG)	31P9121	*
10	256 MB SDRAM (models 21M 21A 21C 21B 21H 21V 22S 15G 16G 21Q 22P 22Y 23G 24G 25G 31G 32G 7BG 7CG 7DG 7EG 21T 33G 51G 52G 7HG 7JG 7KG E6S E6Y 26S 26Y 34S 34Y)	73P2683	*
11	System board, 10/100 E-net (models 11S 21M 21A 21C 21B 21H 21V 22S 13G 15G 16G 21Q 22P 22Y 24G 25G 31G 32G 73G 7AG 7BG 7CG 7EG CTO-U CTO-G 21T 52G 7KG)	19R0703	**

Item #	8177 FRUs	FRU#	CRU
11	System board, (10/100 Enet) w/ video buffer -- optional to 19R0703 (models 11S 21M 21A 21C 21B 21H 21V 22S 13G 15G 16G 21Q 22P 22Y 24G 25G 31G 32G 73G 7AG 7BG 7CG 7EG CTO-U CTO-G 21T 52G 7KG)	39J7965	**
11	System board, (10/100 Enet) w/ video buffer -- optional to 19R0703 (models 11S 21M 21A 21C 21B 21H 21V 22S 13G 15G 16G 21Q 22P 22Y 24G 25G 31G 32G 73G 7AG 7BG 7CG 7EG CTO-U CTO-G 21T 52G 7KG)	41D0948	**
11	System board, 10/100 E-net, no AGP (models A1S D4S E3U 12S D1U D2S A1Y A3G B1G D2P D2Y D3G D4P D4Y E1S E1P E1Y E2G 11G 12Y 14G 17G 23G 72G 74G 75G 76G 77G 78G 79G 7DG A2G A3U B1U B1S B1P D3U E3S E4U E4G 33G 51G 7FG 7HG 7JG E6S E6Y 26S 26Y 34S 34Y E7G 7LG 7MG 7NG)	19R0837	**
11	System board, (10/100 Enet) w/ video buffer, no AGP -- optional to 19R0837 (models A1S D4S E3U 12S D1U D2S A1Y A3G B1G D2P D2Y D3G D4P D4Y E1S E1P E1Y E2G 11G 12Y 14G 17G 23G 72G 74G 75G 76G 77G 78G 79G 7DG A2G A3U B1U B1S B1P D3U E3S E4U E4G 33G 51G 7FG 7HG 7JG E6S E6Y 26S 26Y 34S 34Y E7G 7LG 7MG 7NG)	39J7966	**
11	System board, (10/100 Enet) w/ video buffer, no AGP -- optional to 19R0837 (models A1S D4S E3U 12S D1U D2S A1Y A3G B1G D2P D2Y D3G D4P D4Y E1S E1P E1Y E2G 11G 12Y 14G 17G 23G 72G 74G 75G 76G 77G 78G 79G 7DG A2G A3U B1U B1S B1P D3U E3S E4U E4G 33G 51G 7FG 7HG 7JG E6S E6Y 26S 26Y 34S 34Y E7G 7LG 7MG 7NG)	41D0949	**
12	Intel Celeron 2.4 GHz (models A1S D4S A1S A1Y A3G 74G A2G A3U)	88P7699	**
12	Intel Celeron 2.6 GHz (models D4S D1U D4P D4Y)	13R8907	**
12	Intel Celeron 2.53 GHz (models B1G 76G CTO-U CTO-G B1U B1S B1P)	19R0417	**
12	Intel Celeron 2.66 GHz (models D2S D2P D2Y D3G 75G D3U)	19R0419	**
12	Intel Celeron 2.8 GHz (models E3U E1S E1P E1Y E2G 78G E3S 7LG)	19R0421	**
12	Intel Celeron 2.93 GHz (models E4U E4G 7FG 7MG)	29R6989	**
12	Intel Celeron 3.06 GHz (models E6S E6Y E7G 7NG)	29R6990	**
12	Intel P4 2.8 GHz (models 72G)	19R2302	**
12	Intel P4 2.8 GHz (models 11S 11G 12Y 79G)	74P1631	**
12	Intel P4 2.8 GHz (models 12S)	88P5869	**
12	Intel Prescott P4 2.8 GHz (models 13G 14G 17G 73G 77G 7AG)	19R0423	**
12	Intel Prescott P4 2.8 GHz (models 15G 16G 7BG)	19R0292	**
12	Intel Prescott P4 3.0 GHz (models 21M 21A 21C 21B 21H 21V 22S 21Q 22P 22Y 23G 24G 25G 7CG 7DG 21T 26S 26Y)	19R0294	**
12	Intel Prescott P4 3.2 GHz (models 31G 32G 7EG 33G 7HG 34S 34Y)	19R0296	**
12	Intel Prescott P4 3.4 GHz (models 51G 52G 7JG 7KG)	29R6991	**
13	Heat sink and fan, Northwood <3.0GHz (models E4U E4G 7FG 11S A1S D4S 12S A1S D4S 12S D1U A1Y A3G 74G D4P D4Y 78G 11G 12Y 79G 72G A2G A3U)	32P4004	*

Item #	8177 FRUs	FRU#	CRU
13	Heat sink and fan, Northwood >=3.0 GHZ and all Prescott (models 21M 21A 21C 21B 21H 21V 22S 13G 14G 17G 73G 77G 7AG 15G 16G 7BG 21Q 22P 22Y 23G 24G 25G 7CG 7DG 31G 32G 7EG 21T B1U B1S B1P D3U E3S B1G 76G D2S D2P D2Y D3G 75G E3U E1S E1P E1Y E4U E4G 7FG 31G 32G 7EG 33G 7HG 51G 52G 7JG 7KG E5U E5G 7GG E6S E6Y 26S 26Y 34S 34Y E7G 7NG 7LG 7MG)	13R9195	*
13	Heat sink and fan, Northwood >=3.0 GHZ and all Prescott , Dual Heat Pipe -- optional to 13R9195 (models 21M 21A 21C 21B 21H 21V 22S 13G 14G 17G 73G 77G 7AG 15G 16G 7BG 21Q 22P 22Y 23G 24G 25G 7CG 7DG 31G 32G 7EG 21T B1U B1S B1P D3U E3S B1G 76G D2S D2P D2Y D3G 75G E3U E1S E1P E1Y E4U E4G 7FG 31G 32G 7EG 33G 7HG 51G 52G 7JG 7KG E5U E5G 7GG E6S E6Y 26S 26Y 34S 34Y E7G 7NG 7LG 7MG)	13N2951	*

The FRUs listed in the following table are not illustrated.

8177 FRUs	FRU#	CRU
Retention kit (all models)	89P6740	*
Fan bracket assembly (models 21M 21A 21C 21B 21H 21V 22S 21Q 22P 22Y 23G 24G 25G 7CG 7DG 31G 32G 7EG 21T 33G 7HG 51G 52G 7JG 7KG 26S 26Y 34S 34Y E7G 7NG)	89P6700	*
System board EMC shield kit (all models)	89P4761	*
Hard disk drive mounting bracket assembly (all models)	88P5916	*
Bezel kit (all models)	49P4371	*
Cable, dual USB 2.0 (all models)	49P4365	*
Cable, ATA66 1 drop (all models)	88P5967	*
Cable, ATA66 2 drop (all models)	88P5971	*
Cable, Diskette drive (all models)	88P6515	*
Cable, second serial port (all models)	49P4530	*
Speaker Asm (models 21M 21A 21C 21B 21H 21V 21Q 21T E6S E6Y 26S 26Y 34S 34Y)	00N5151	*
Cable assembly, power/LED (all models)	37L5092	*
5.25 EMC shield (all models)	19K5548	*
Misc. hardware kit (all models)	88P5965	*
Planar shield (all models)	26K1216	*
Battery, 3.0 V (all models)	33F8354	*
Mouse, 2 button, black (models D1U A1U E1U)	24P0383	*
Mouse, optical wheel (models 21M 21A 21C 21B 21H 21V 11S 22S A1S D4S 12S D2S A1Y D2P D2Y D4P D4Y E1S E1P E1Y 12Y 13G 15G 16G 21Q 22P 22Y 24G 25G 31G 32G 73G 7BG 7CG 7EG A3G B1G D1U D3G E2G E3U 11G 14G 17G 23G 72G 74G 75G 76G 77G 78G 79G 7AG 7DG A2G A3U 21T B1U B1S B1P D3U E3S E4U E4G 33G 51G 52G 7FG 7HG 7JG 7KG E6S E6Y 26S 26Y 34S 34Y E7G 7LG 7MG 7NG)	89P5089	*
RJ11 connector adapter (Spain, Ireland) (All "G" models)	60H6043	*
RJ11 connector adapter (Austria) (All "G" models)	60H6045	*
RJ11 connector adapter (Belgium) (All "G" models)	60H6046	*
RJ11 connector adapter (Denmark) (All "G" models)	60H6047	*
RJ11 connector adapter (Norway, Finland) (All "G" models)	60H6048	*
RJ11 connector adapter (France) (All "G" models)	60H6049	*
RJ11 connector adapter (Germany) (All "G" models)	60H6050	*
RJ11 connector adapter (UK, NZ, HK) (All "G", "M", "B", "H" models)	60H6051	*
RJ11 connector adapter (Italy) (All "G" models)	60H6052	*
RJ11 connector adapter (Netherlands) (All "G" models)	60H6053	*
RJ11 connector adapter (Sweden) (All "G" models)	60H6054	*
RJ11 connector adapter (Switzerland) (All "G" models)	60H6055	*

8177 Windows XP Home Recovery CDs	FRU#	CRU
US (models A2G)	19R2723	*
FR (models A2G)	39J6251	*
GR (models A2G)	39J6252	*
IT (models A2G)	39J6254	*

8177 Windows XP Home Recovery CDs	FRU#	CRU
DK (models A2G)	39J6257	*
NL (models A2G)	39J6260	*
AE (models A2G)	39J6264	*
SV (models A2G)	39J6256	*
HE (models A2G)	39J6261	*
FI (models A2G)	39J6258	*
NO (models A2G)	39J6259	*
PL (models A2G)	39J6262	*
PO (models A2G)	39J6268	*
RU (models A2G)	39J6265	*
HU (models A2G)	39J6267	*
CZ (models A2G)	39J6263	*
TR (models A2G)	39J6266	*
GK (models A2G)	39J6269	*

8177 Windows XP Pro Recovery CDs	FRU#	CRU
US (Models 21M 21A 21H D1U E3U A2U A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A3U 21T 21Q B1U D3U E4U E4G 33G 51G 52G 7FG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	39J6414	*
FR (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	39J6415	*
GR (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	39J6416	*
IT (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	39J6418	*
SP (models 22S D2S A1S D4S 12S A1Y A3G B1G D2Y D3G D4Y E1S E1Y E2G 11G 12Y 13G 14G 15G 16G 17G 22Y 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG B1S E3S E4G 33G 51G 52G 7FG 7HG 7JG 7KG E6S E6Y 26S 26Y 34S 34Y)	39J6417	*
BR (models D2P D4P E1P 22P B1P)	39J6419	*
DK (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	39J6421	*
NL (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	39J6424	*
AE (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	39J6428	*
SV (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	39J6420	*

8177 Windows XP Pro Recovery CDs	FRU#	CRU
HE (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	39J6425	*
FI (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	39J6422	*
NO (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	39J6423	*
PL (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	39J6426	*
PO (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	39J6432	*
RU (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	41D1950	*
RE (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	41D1949	*
HU (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	39J6431	*
CZ (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	39J6427	*
TR (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	39J6430	*
GK (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	39J6433	*
SL (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	39J6434	*
CS (models 21C)	30R4834	*
Taiwan (models 21V)	30R4813	*
HK (models 21B)	30R4827	*
Multilingual 1 (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG E4G 33G 51G 52G 7FG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	39J7221	*
Multilingual 2 (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG E4G 33G 51G 52G 7FG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	39J7222	*



8177 Keyboard (Preferred Pro Fullsize, PS/2, Stealth Black)	FRU#	CRU
US English (models 21M 21A 21C 21H E3U D1U A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 21Q 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G A3U B1U D3U E4U E4G 33G 51G 52G 7FG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8300	*
Arabic (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8301	*
Belgian/French (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8302	*
Bulgarian (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8305	*
Czech (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8307	*
Danish (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8308	*
Dutch (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8309	*
French (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8310	*
German (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8313	*
Greek (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8314	*
Belgian/UK (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8303	*
Hebrew (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8315	*
Hungarian (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8316	*
Iceland (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8317	*
Italian 141 (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8318	*
Italian 142 (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8319	*
LA Spanish (models 11S 22S A1S D4S 12S D2S A1Y D2Y D4Y E1S E1Y 12Y 22Y B1S E3S E6S E6Y 26S 26Y 34S 34Y)	89P8322	*

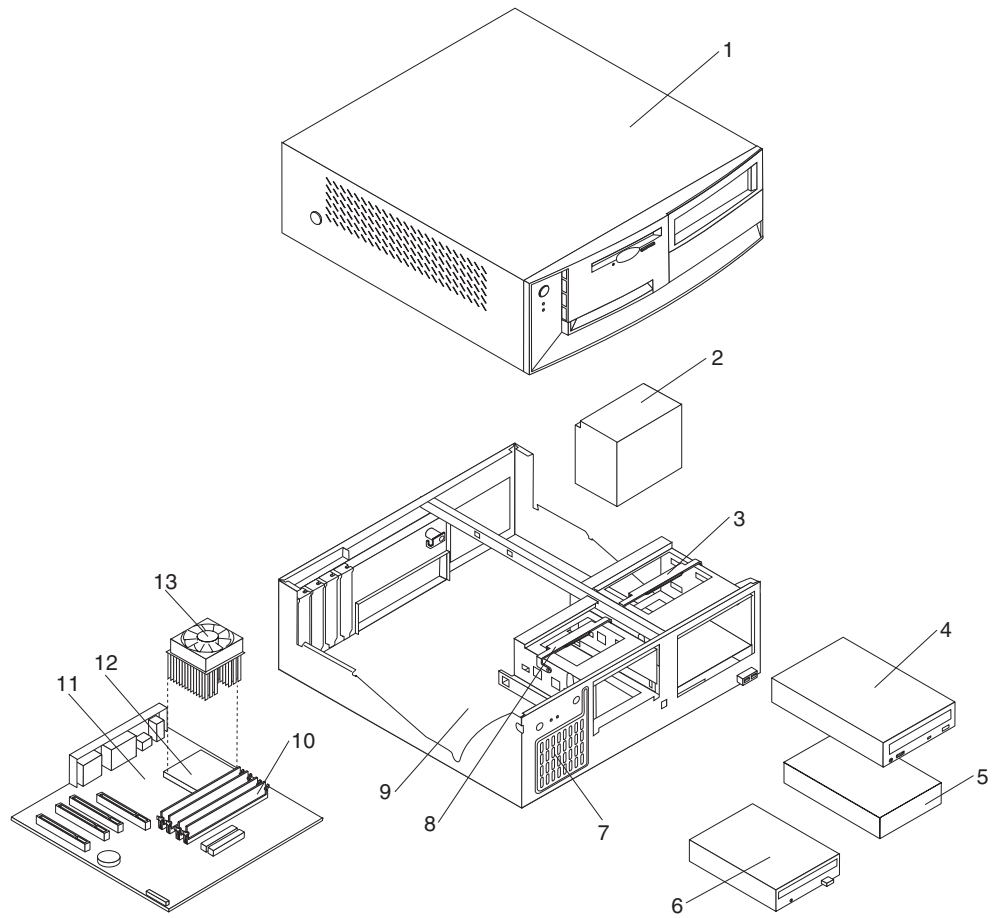
8177 Keyboard (Preferred Pro Fullsize, PS/2, Stealth Black)	FRU#	CRU
Norwegian (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8323	*
Polish (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8324	*
Portuguese (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8325	*
Romanian (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8326	*
Russian (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G)	89P8327	*
Russian/Cyrillic (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8328	*
Serbian/Cyrillic (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8329	*
Slovak (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8330	*
Spanish (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8331	*
Swedish/Finn (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8332	*
Swiss F/G (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8333	*
Thailand (models 21T)	89P8334	*
Turkish 440 (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8335	*
Turkish 179 (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8336	*
UK English (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8337	*
US Euro (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8338	*
Yugoslav/Latin (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	89P8339	*
Brazil/Portuguese (models D2P D4P E1P 22P B1P)	89P8304	*

8177 Keyboards (Productivity USB)	FRU#	CRU
US English (models E4U E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8800	*
Arabic (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8801	*
Arabic/French (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8802	*
Belgian/French (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8803	*
Belgian/UK (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8804	*
Bulgarian (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8806	*
Czech (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8808	*
Danish (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8809	*
Dutch (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8810	*
French (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8811	*
German (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8814	*
Greek (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8815	*
Hebrew (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8816	*
Hungarian (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8817	*
Iceland (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8818	*
Italian 141 (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8819	*
Norwegian (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8823	*
Polish (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8824	*
Portuguese (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8825	*
Romanian (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8826	*
Romanian (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8827	*
Russian/Cyrillic (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8828	*
Serbian/Cyrillic (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8829	*
Slovak (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8830	*
Spanish (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8831	*
Swedish/Finn (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8832	*
Swiss F/G (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8833	*
Turkish 440 (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8835	*
Turkish 179 (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8836	*
UK English (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8837	*
US International (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8838	*
Yugoslav/Latin (models E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG)	89P8839	*

8177 Power Cords	FRU#	CRU
Power Cord (models 11S 21A 21V 22S A1S D4S E3U 12S D1U A3G B1G D2P D3G D4P E1S E1P E2G 11G 13G 14G 15G 16G 17G 22P 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G A3U 21T B1U B1S B1P D3U E3S E4U E4G 33G 51G 52G 7FG 7HG 7JG 7KG E6S 26S 34S E7G 7LG 7MG 7NG)	6952301	*
Power Cord (ANZ) (models 21M)	13F9939	*
Power Cord (EMEA, ANZ, ASEAN Eng, Korea) (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7GG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	13F9978	*

8177 Power Cords	FRU#	CRU
Power Cord (EMEA, ANZ, ASEAN Eng, HK Eng) (models 21H A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	14F0032	*
Power Cord (EMEA) (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	13F9996	*
Power Cord (EMEA, LA) (models 11S 22S A1S D4S 12S D2S A1Y A3G B1G D2P D2Y D3G D4P D4Y E1S E1P E1Y E2G 11G 12Y 13G 14G 15G 16G 17G 22P 22Y 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G B1S B1P E3S E4G 33G 51G 52G 7FG 7HG 7JG 7KG E6S E6Y 26S 26Y 34S 34Y)	14F0068	*
Power Cord (APU) (models A1Y D2Y D4Y E1Y 12Y 22Y E6Y 26Y 34Y)	36L8879	*
Power Cord (China, HK) (models 21C 21B 21H)	02K0545	*
Power Cord (EMEA) (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	14F0086	*
Power Cord (EMEA, ANZ, ASEAN Eng) (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	14F0014	*
Power Cord (EMEA) (models A3G B1G D3G E2G 11G 13G 14G 15G 16G 17G 23G 24G 25G 31G 32G 72G 73G 74G 75G 76G 77G 78G 79G 7AG 7BG 7CG 7DG 7EG A2G E4G 33G 51G 52G 7FG 7HG 7JG 7KG E7G 7LG 7MG 7NG)	14F0050	*
Power Cord (India) (models 21Q)	49P2078	*

# Machine Type 8178



Item #	8178 FRUs	FRU#	CRU
1	Top cover assembly (all models)	88P5962	**
2	230W Power Supply - AcBel PFC (models D1M 12M 12A 13M 21M 22M 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G CT0-U CT0-G D2M E1M 33M 34M 51G 51A 51T 52G 77G 78G)	74P4300	N
2	230W Power Supply - AcBel China version (models 12C 12B 12H 12V 12Q 51Q)	74P4301	N
3	Pivot lock, 5.25 DASD (all models)	09N5747	*
4	CD-ROM Drive 48X - Black w/o jack & vol (models D1M 12M 12A 12C 12B 12H 12V 21M 12Q 14G 15G 24G 32G D2M E1M 51G 51A 51Q 51T)	40Y8801	**
4	CD-ROM Drive 48X - Black w/o jack & vol (models D1M 12M 12A 12C 12B 12H 12V 21M 12Q 14G 15G 24G 32G D2M E1M 51G 51A 51Q 51T)	40Y8805	**
4	CD-ROM Drive 48X - Black w/o jack & vol (models D1M 12M 12A 12C 12B 12H 12V 21M 12Q 14G 15G 24G 32G D2M E1M 51G 51A 51Q 51T)	40Y8807	**
4	CD-ROM Drive 48X - Black w/o jack & vol (models D1M 12M 12A 12C 12B 12H 12V 21M 12Q 14G 15G 24G 32G D2M E1M 51G 51A 51Q 51T)	40Y8813	**

Item #	8178 FRUs	FRU#	CRU
4	CD-ROM Drive 48X - Black w/o jack & vol (models D1M 12M 12A 12C 12B 12H 12V 21M 12Q 14G 15G 24G 32G D2M E1M 51G 51A 51Q 51T)	40Y8929	**
4	DVD-ROM 16X/48X (Black) (models 16G 23G 31G 71G 72G 73G 74G 75G 76G 52G 77G 78G)	40Y8811	**
4	CD-RW Drive (48X/32X/48X) (models 13M 22M 33M)	40Y8901	**
4	Rambo IV (models 34M)	26K5383	**
5	Hard disk drive, 40 GB EIDE (models D1M 12M 12A 12C 12B 12H 12V 13M 21M 22M 12Q 14G 15G 24G 32G 71G 73G 75G D2M E1M 51G 51A 51Q 51T 77G)	40Y8757	*
5	Hard disk drive, 80 GB EIDE (models 16G 23G 31G 72G 74G 76G 52G 78G)	40Y8758	*
5	Hard disk drive, 80 GB S-ATA (models 33M 34M)	71P7293	*
5	Hard disk drive, 80 GB S-ATA (models 33M 34M)	40Y8761	*
6	Diskette drive, 3.5 1.44 MB (all models)	40Y9107	**
6	Diskette drive, 3.5 1.44 MB (all models)	40Y8899	**
6	Diskette drive, 3.5 1.44 MB (all models)	40Y9105	**
7	Speaker assembly (models A1M D1M 12M 12A 12T 12C 12B 12H 12V 13M 21M 22M)	00N5151	*
8	Pivot lock, 3.5 Diskette drive (all models)	09N5748	*
9	Chassis/top cover kit (all models)	88P5963	**
10	256 MB SDRAM (models D1M 12M 12A 12C 12B 12H 12V 13M 12Q 14G D2M E1M)	31P9121	*
10	256 MB SDRAM (models 21M 22M 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 51A 51Q 51T 52G 77G 78G)	73P2683	*
10	512 MB SDRAM (models 33M 34M)	73P2684	*
11	System board, 10/100 E-net (models 12M 12A 12C 12B 12H 12V 13M 21M 22M 12Q 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G CTO-U CTO-G 33M 34M 51G 51A 51Q 51T 52G 77G 78G)	19R0703	**
11	System board, (10/100 Enet) w/ video buffer -- optional to 19R0703 (models 12M 12A 12C 12B 12H 12V 13M 21M 22M 12Q 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G CTO-U CTO-G 33M 34M 51G 51A 51Q 51T 52G 77G 78G)	39J7965	**
11	System board, (10/100 Enet) w/ video buffer -- optional to 19R0703 (models 12M 12A 12C 12B 12H 12V 13M 21M 22M 12Q 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G CTO-U CTO-G 33M 34M 51G 51A 51Q 51T 52G 77G 78G)	41D0948	**
11	System board, 10/100 E-net, no AGP (models D1M D2M E1M)	19R0837	**
11	System board, (10/100 Enet) w/ video buffer, no AGP -- optional to 19R0837 (models D1M D2M E1M)	39J7966	**
11	System board, (10/100 Enet) w/ video buffer, no AGP -- optional to 19R0837 (models D1M D2M E1M)	41D0949	**
12	Intel Celeron 2.6 GHz (models D1M)	13R8907	**
12	Intel Celeron 2.66 GHz (models D2M)	19R0419	**
12	Intel Celeron 2.8 GHz (models E1M)	19R0421	**
12	Intel Prescott P4 2.8 GHz (models 12M 12A 12C 12B 12H 12V 13M 12Q 14G)	19R0423	**

Item #	8178 FRUs	FRU#	CRU
12	Intel Prescott P4 2.8 GHz (models 15G 16G 71G 72G)	19R0292	**
12	Intel Prescott P4 3.0 GHz (models 21M 22M 23G 24G 73G 74G)	19R0294	**
12	Intel Prescott P4 3.2 GHz (models 31G 32G 75G 76G 33M 34M)	19R0296	**
12	Intel Prescott P4 3.4 GHz (models 51G 51A 51Q 51T 52G 77G 78G)	29R6991	**
13	Heat sink and fan, Northwood <3.0GHz (models D1M)	32P4004	**
13	Heat sink and fan, Northwood >=3.0 GHZ and all Prescott (models 12Q 14G 15G 16G 71G 72G 23G 24G 73G 74G 31G 32G 75G 76G D2M E1M 12M 12A 12C 12B 12H 12V 13M 21M 22M 33M 34M 51G 51A 51Q 51T 52G 77G 78G)	13R9195	**
13	Heat sink and fan, Northwood >=3.0 GHZ and all Prescott, Dual Heat Pipe -- optional to 13R9195 (models 12Q 14G 15G 16G 71G 72G 23G 24G 73G 74G 31G 32G 75G 76G D2M E1M 12M 12A 12C 12B 12H 12V 13M 21M 22M 33M 34M 51G 51A 51Q 51T 52G 77G 78G)	13N2951	**

The FRUs listed in the following table are not illustrated.

8178 FRUs	FRU#	CRU
Retention kit (all models)	89P6740	*
Fan bracket assembly (models 21M 22M 23G 24G 73G 74G 31G 32G 75G 76G 33M 34M 51G 51A 51Q 51T 52G 77G 78G)	89P6700	*
System board EMC shield kit (all models)	89P4761	*
Hard disk drive mounting bracket assembly (all models)	88P5916	*
Heat Sink, Grease, Heat Pipe (all models)	13R9195	*
Heat Sink, Dual Heat Pipe (all models)	13N2951	*
Bezel kit (all models)	49P4371	*
Cable, dual USB 2.0 (all models)	49P4365	*
Cable, dual USB Cable, Long USB 2.0 (all models)	89P6749	*
Cable, ATA66 1 drop (all models)	88P5967	*
Cable, ATA66 2 drop (all models)	88P5971	*
Cable, Diskette drive (all models)	88P6515	*
Cable, second serial port (all models)	49P4530	*
Speaker Asm (models D1M 12M 12A 12C 12B 12H 12V 13M 21M 22M 12Q 33M 34M 51G 51A 51Q 51T 52G 77G 78G D2M E1M)	00N5151	*
Cable assembly, power/LED (all models)	37L5092	*
5.25 EMC shield (all models)	19K5548	*
Misc. hardware kit (all models)	88P5965	*
Planar shield (all models)	26K1216	**
Battery, 3.0 V (all models)	33F8354	*
Mouse, 2 button, black (models 11G)	24P0383	*
Mouse, optical wheel (models D1M 12M 12A 12C 12B 12H 12V 13M 21M 22M 12Q 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G D2M E1M 33M 34M 51G 51A 51Q 51T 52G 77G 78G)	89P5089	*
RJ11 connector adapter (Spain, Ireland) (All "G" models)	60H6043	*
RJ11 connector adapter (Austria) (All "G" models)	60H6045	*
RJ11 connector adapter (Belgium) (All "G" models)	60H6046	*
RJ11 connector adapter (Denmark) (All "G" models)	60H6047	*
RJ11 connector adapter (Norway, Finland) (All "G" models)	60H6048	*
RJ11 connector adapter (France) (All "G" models)	60H6049	*
RJ11 connector adapter (Germany) (All "G" models)	60H6050	*
RJ11 connector adapter (UK, NZ, HK) (All "G", "M", "B", "H" models)	60H6051	*
RJ11 connector adapter (Italy) (All "G" models)	60H6052	*
RJ11 connector adapter (Netherlands) (All "G" models)	60H6053	*
RJ11 connector adapter (Sweden) (All "G" models)	60H6054	*
RJ11 connector adapter (Switzerland) (All "G" models)	60H6055	*

8178 Windows XP Pro Recovery CDs	FRU#	CRU
US (Models D1M 12M 12A 12H 13M 21M 22M 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 12Q D2M E1M 33M 34M 51G 51A 51Q 51T 52G 77G 78G)	39J6414	*



8178 Windows XP Pro Recovery CDs	FRU#	CRU
FR (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	39J6415	*
GR (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	39J6416	*
IT (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	39J6418	*
SP (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	39J6417	*
DK (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	39J6421	*
NL (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	39J6424	*
AE (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	39J6428	*
SV (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	39J6420	*
HE (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	39J6425	*
FI (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	39J6422	*
NO (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	39J6423	*
PL (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	39J6426	*
PO (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	39J6432	*
RU (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	41D1950	*
RE (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	41D1949	*
HU (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	39J6431	*
CZ (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	39J6427	*
TR (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	39J6430	*
GK (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	39J6433	*
SL (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	39J6434	*
CS (models 12C)	30R4813	*
Taiwan (models 12V)	30R4820	*
HK (models 12B)	30R4827	*
Multilingual 1 (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	39J7221	*
Multilingual 2 (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	39J7222	*

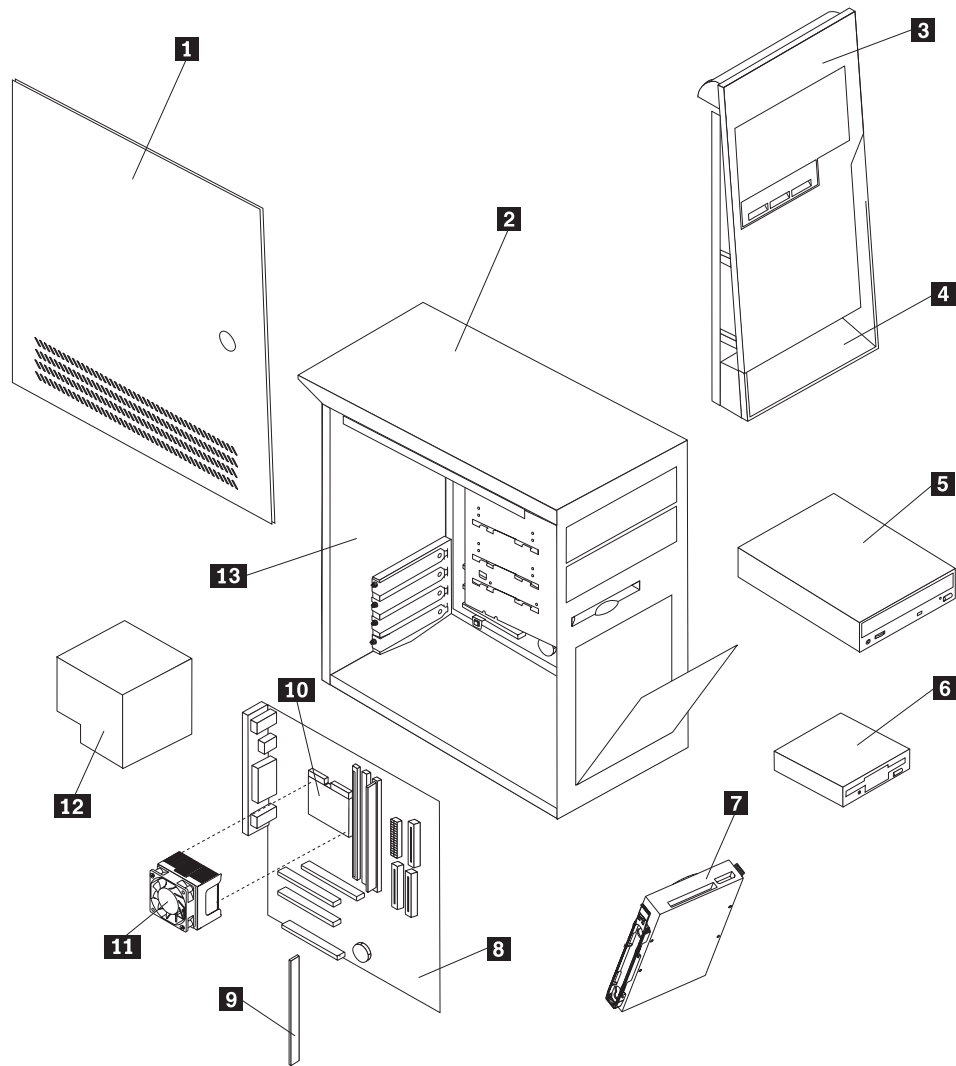
8178 Keyboards (Standard PS/2 Black)	FRU#	CRU
US English (models D1M 12M 12A 12C 12H 13M 21M 22M 12Q 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G D2M E1M 33M 34M 51G 51A 51Q 52G 77G 78G)	89P8300	*
Arabic (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8301	*
Belgian/French (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8302	*

8178 Keyboards (Standard PS/2 Black)	FRU#	CRU
Bulgarian (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8305	*
Chinese/US (models 12B 12V)	89P8306	*
Czech (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8307	*
Danish (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8308	*
Dutch (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8309	*
French (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8310	*
German (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8313	*
Greek (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8314	*
Belgian/UK (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8303	*
Hebrew (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8315	*
Hungarian (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8316	*
Iceland (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8317	*
Italian 141 (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8318	*
Italian 142 (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8319	*
Norwegian (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8323	*
Polish (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8324	*
Portuguese (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8325	*
Romanian (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8326	*
Russian (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8327	*
Russian/Cyrillic (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8328	*
Serbian/Cyrillic (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8329	*
Slovak (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8330	*
Spanish (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8331	*
Swedish/Finn (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8332	*

<b>8178 Keyboards (Standard PS/2 Black)</b>	<b>FRU#</b>	<b>CRU</b>
Swiss F/G (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8333	*
Turkish 440 (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8335	*
Turkish 179 (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8336	*
UK English (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8337	*
US Euro (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8338	*
Yugoslav/Latin (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	89P8339	*

<b>8178 Power Cords</b>	<b>FRU#</b>	<b>CRU</b>
Power Cord (models 12A 12V 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 51A 51T 52G 77G 78G)	6952301	*
Power Cord (ANZ) (models D1M 12M 13M 21M 22M D2M E1M 33M 34M)	13F9939	*
Power Cord (EMEA, ANZ, ASEAN Eng, Korea) (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	13F9978	*
Power Cord (EMEA, ANZ, ASEAN Eng, HK Eng) (models 12H 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	14F0032	*
Power Cord (EMEA) (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	13F9996	*
Power Cord (EMEA, LA) (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	14F0068	*
Power Cord (China, HK) (models 12C 12B 12H)	02K0545	*
Power Cord (EMEA) (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	14F0086	*
Power Cord (EMEA, ANZ, ASEAN Eng) (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	14F0014	*
Power Cord (EMEA) (models 14G 15G 16G 23G 24G 31G 32G 71G 72G 73G 74G 75G 76G 51G 52G 77G 78G)	14F0050	*
Power Cord (India) (models 12Q 51Q)	49P2078	*

# Machine Type 8179



Item #	8179 FRUs	FRU#	CRU
1	Side cover assembly (all models)	59P8547	*
2	"L" Cover assembly (all models)	59P8546	**
3	Front Bezel assembly (all models)	59P8544	*
4	Bezel trim/label kit (all models)	49P1900	*
5	CD-ROM Drive 48X - Black w/o jack & vol (models 12C 13C)	40Y8801	*
5	CD-ROM Drive 48X - Black w/o jack & vol (models 12C 13C)	40Y8805	*
5	CD-ROM Drive 48X - Black w/o jack & vol (models 12C 13C)	40Y8807	*
5	CD-ROM Drive 48X - Black w/o jack & vol (models 12C 13C)	40Y8813	*
5	CD-ROM Drive 48X - Black w/o jack & vol (models 12C 13C)	40Y8929	*
5	DVD-ROM 16X/48X (Black) (models)	71P7357	*
5	DVD-ROM 16X/48X (Black) (models)	26K5385	*
5	48X Combo drive (models)	33P3301	*
6	Diskette drive, 3.5 1.44MB (all models)	40Y9107	*

Item #	8179 FRUs	FRU#	CRU
6	Diskette drive, 3.5 1.44MB (all models)	40Y8899	*
6	Diskette drive, 3.5 1.44MB (all models)	40Y9105	*
7	Hard disk drive, 40GB EIDE (models 12C 13C)	40Y8757	*
8	System board, 10/100 E-net (models 13C)	19R0703	**
8	System board, (10/100 Enet) w/ video buffer -- optional to 19R0703 (models 13C)	39J7965	**
8	System board, (10/100 Enet) w/ video buffer -- optional to 19R0703 (models 13C)	41D0948	**
8	System board, 10/100 E-net, no AGP (models 12C)	19R0837	**
8	System board, (10/100 Enet) w/ video buffer, no AGP -- optional to 19R0837 (models 12C)	39J7966	**
8	System board, (10/100 Enet) w/ video buffer, no AGP -- optional to 19R0837 (models 12C)	41D0949	**
9	256 MB SDRAM (models 12C)	31P9121	*
9	256 MB SDRAM (models 13C)	73P2683	*
10	P4 2.8 GHz Prescott P4 (models 12C)	19R0423	**
10	P4 2.8 GHz Prescott P4 (models 13C)	19R0292	**
11	Heat sink and fan for Prescott (models 12C 13C)	13R9195	**
11	Heat sink and fan, Dual Heat Pipe -- optional to 13R9195 (models 12C 13C)	13N2951	**
12	Power supply, AcBel China, 230W (models 12C 13C)	74P4301	N
13	Chassis assembly (all models)	59P8542	N

The FRUs listed in the following table are not illustrated.

8179 FRUs	FRU#	CRU
Bezel blanks kit (all models)	25P0068	*
Front bezel release kit (all models)	25P0069	**
Retainer, Adapter Cards (all models)	59P8564	*
Speaker assembly (models 13C)	00N5151	*
5.25 EMC shield (all models)	19K5548	**
Rubber foot (all models)	03K9655	*
Universal adapter bracket (all models)	32P4743	**
80 mm fan assembly (models with 3.06GHz microprocessor or greater)	22P4447	**
2 audio front panel (models)	49P1750	**
Cable, audio assembly (all models)	49P1933	**
Cable, dual USB 2.0 (all models)	49P4365	**
Hard disk drive bracket assembly (all models)	59P8543	**
Hard disk drive tray (all models)	59P8549	*
Power switch assembly (all models)	59P8545	**
Bezel, Diskette drive (all models)	59P8548	*
Cable, 2 drop (close spacing) ATA 66/100 w/pull tabs (all models)	59P8571	*
Cable, 2 drop** (large spacing) ATA 66/100 w/pull tabs (all models)	59P8572	*
Cable, Diskette drive (all models)	59P8568	*
Battery, 3.0 V (all models)	33F8354	*

8179 FRUs	FRU#	CRU
Mouse, optical wheel (models 12C 13C)	89P5089	*
Cable clip (all models)	59P8584	*
System board EMC shield kit (all models)	89P4761	**
Retention kit (all models)	89P6740	N
Heatsink grease, Heat pipe (all models)	13R9195	**
Misc. hardware kit (all models)	09N5764	**
RJ11 connector adapter (Spain, Ireland) (All "G" models)	60H6043	*
RJ11 connector adapter (Austria) (All "G" models)	60H6045	*
RJ11 connector adapter (Belgium) (All "G" models)	60H6046	*
RJ11 connector adapter (Denmark) (All "G" models)	60H6047	*
RJ11 connector adapter (Norway, Finland) (All "G" models)	60H6048	*
RJ11 connector adapter (France) (All "G" models)	60H6049	*
RJ11 connector adapter (Germany) (All "G" models)	60H6050	*
RJ11 connector adapter (UK, NZ, HK) (All "G", "M", "B", "H" models)	60H6051	*
RJ11 connector adapter (Italy) (All "G" models)	60H6052	*
RJ11 connector adapter (Netherlands) (All "G" models)	60H6053	*
RJ11 connector adapter (Sweden) (All "G" models)	60H6054	*
RJ11 connector adapter (Switzerland) (All "G" models)	60H6055	*

8179 Windows XP Home Recovery CDs	FRU#	CRU
Simplified Chinese (models 12C)	30R4777	*

8179 Windows XP Pro Recovery CDs	FRU#	CRU
CS (models 13C)	30R4813	*

8179 Keyboards (Standard PS/2 Black)	FRU#	CRU
US English (models 12C 13C)	89P8300	*

8179 Power Cords	FRU#	CRU
Power Cord (China, HK) (models 12C 13C)	02K0545	*

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## Chapter 12. 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)
- Alert on LAN™

#### Hardware controlled Passwords

Hardware controlled passwords are set using the Setup Utility program. For more information about passwords, see “Using passwords” on page 55.

#### 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” on page 214.

#### Management Information Format (MIF)

Management Information Format (MIF) is a file used to maintain a list of the system unit serial number along with all serialized components (for example, system board, riser card, memory, and processor).

At the time of computer manufacture, the EPROM is loaded with the serial numbers of the system and all major components.

A company called Retain-a-Group is a central data warehouse offering serial number data management. Retain-a-Group acts as a focal point to law enforcement. The customer has the option to purchase serial number information and services from Retain-a-Group. It is the customer’s responsibility to maintain the MIF file and to inform Retain-a-Group of any changes to the file.

Some customers might request that their servicers assist them in maintaining the MIF file when serialized components are replaced during hardware service. This assistance is between the customer and the servicer. The servicer can use the DMI MIF Browser to update the MIF information in the EPROM. It is anticipated that some servicers might charge for this service.

To update the EPROM using the DMI MIF Browser, use the following procedure.

1. Click **Start** from the desktop, then **Programs**.
2. Select **SystemView Agent**
3. Select the **Serial Number Information** icon
4. Click the plus sign to expand.
5. Select the component you want to view or edit.
6. Double click on the component you want to change.
7. Enter new data in the *Value* field, then click **Apply**.

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## 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.

- Current Level BIOS information
  - Run the Setup Utility to determine the level of BIOS installed.
- Sources for obtaining the latest level BIOS available
  1. Lenovo support web site:  
<http://www.lenovo.com/think/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 or CD-ROM

1. Shut down the operating system and turn off the computer.
2. Insert the flash update diskette or CD-ROM.
3. Turn on the computer. The update begins.
4. When you are prompted to select a language, press the number on your keyboard that corresponds to the language; then press Enter.
5. When prompted to change the serial number, press Y, type the seven character serial number of your computer, and then press Enter.
6. When prompted to change the machine type/model, press Y, type the seven character machine type/model of your computer, and then press Enter.
7. Follow the instructions on the screen to complete the update.

### Updating (flashing) BIOS from your operating system

**Note:** Due to constant improvements being made to the Lenovo Web site, Web page content (including the links referenced in the following procedure) is subject to change.

1. From your browser, type <http://www.lenovo.com/think/support>.
2. In the Use Quick path field, type your 4-digit machine type and click **Go**.
3. Under Browse by product, click **Downloads and drivers**.
4. Scroll down to the BIOS category and click on the **Flash Bios Update**.



5. On the Flash BIOS Update page, scroll down to locate the .txt file for the flash from the operating system version. Click the .txt file.
6. Print these instructions. This is very important because these instructions are not on the screen after the download begins.
7. From the browser, click **Back** to return to the list of files. Carefully follow the printed instructions to download, extract, and install the update.

## 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. Open the cover.
2. Remove any parts necessary to gain access to the Clear CMOS/Recovery jumper.
3. Move the Clear CMOS/Recovery jumper from the standard position (pins 1 and 2) to pins 2 and 3.
4. Insert the BIOS flash diskette in the diskette drive.
5. Close the cover and reconnect the computer power cord to the computer and to an electrical outlet. Turn on the computer.
6. 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.
7. When the computer turns off, open the cover.
8. Move the Clear CMOS/Recovery jumper back to the original position (pins 1 and 2).
9. Remove the BIOS flash diskette from the diskette drive.
10. Close or install the cover and reconnect all external cables.

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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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## Recovering software using the Rescue and Recovery program

The Rescue and Recovery program provides an environment that runs independently of the Windows operating system and is hidden from the Windows operating system. Because the Rescue and Recovery workspace is hidden, it is immune from most virus attacks and provides a safe place to perform rescue and recovery operations that might not be possible in the Windows environment. The following recovery solutions are provided by the Rescue and Recovery program:

- Create Product Recovery discs.
- Create rescue media.
- Back up your hard disk periodically.
- Create a Recovery Repair diskette.

If a problem with the software is encountered, you can use the recovery tools from either the Windows environment or from the Rescue and Recovery workspace to do one of the two recovery operations:

- Rescue files
- Restore your backups

### Starting the Rescue and Recovery workspace

To start the program:

1. If your computer is already on when you start this procedure, shut down the operating system and turn off the computer.
2. Repeatedly press the F11 key as you turn on the computer.

**Note:** If a user password or an administrator password has been set, the Rescue and Recovery workspace is not displayed until you type the password.

3. The Rescue and Recovery workspace is displayed.

Refer to the *Quick Reference* that comes with the computer and the Rescue and Recovery help system for additional information about using the Rescue and Recovery program.



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