

Lenovo 3000 N100 and N200 Hardware Maintenance Manual

June 2007

This manual supports:

Lenovo 3000 N100

(MT 0689 and 0768)

Lenovo 3000 N200

(MT 0769)

Lenovo 3000 N100 and N200 Hardware Maintenance Manual

Note

Before using this information and the product it supports, be sure to read the general information under "Notices" on page 155.

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Introduction

About this manual

This manual contains service and reference information for Lenovo 3000 N100 and N200 (MT 0689, 0768, and 0769). Use this manual along with the advanced diagnostic tests to troubleshoot problems.

The manual is divided into sections as follows:

- The common sections provide general information, guidelines, and safety information required in servicing computers.
- The product-specific section includes service, reference, and product-specific parts information.

Important

This manual is intended for trained service personnel who are familiar with Lenovo 3000 products. Use this manual along with the advanced diagnostic tests to troubleshoot problems effectively.

Before servicing a Lenovo 3000 product, be sure to review the safety information under “Safety notices: multilingual translations” on page 5, “Safety information” on page 11, and “Laser compliance statement” on page 15.

Important service information

Important

BIOS and device driver fixes are customer-installable. The BIOS and device drivers are posted on the customer support site <http://www.lenovo.com/support>

Advise customers to contact the Customer Support Center at 800-426-7378 if they need assistance in obtaining or installing any software fixes, drivers, and BIOS downloads.

Customers in Canada should call the Customer Support Center at 800-565-3344 for assistance or download information.

Strategy for replacing FRUs

Before replacing parts

Make sure that all software fixes, drivers, and BIOS downloads are installed before replacing any FRUs listed in this manual.

Use the following strategy to prevent unnecessary expense for replacing and servicing FRUs:

- If you are instructed to replace a FRU but the replacement does not correct the problem, reinstall the original FRU before you continue.
- Some computers have both a processor board and a system board. If you are instructed to replace either the processor board or the system board, and replacing one of them does not correct the problem, reinstall that board, and then replace the other one.
- If an adapter or a device consists of more than one FRU, any of the FRUs may be the cause of the error. Before replacing the adapter or device, remove the FRUs, one by one, to see if the symptoms change. Replace only the FRU that changed the symptoms.

Attention: The setup configuration on the computer you are servicing may have been customized. Running Automatic Configuration may alter the settings. Note the current configuration settings (using the View Configuration option); then, when service has been completed, verify that those settings remain in effect.

Strategy for replacing a hard disk drive

Always try to run a low-level format before replacing a hard disk drive.

Attention: The drive startup sequence in the computer you are servicing may have been changed. Be extremely careful during write operations such as copying, saving, or formatting. If you select an incorrect drive, data or programs can be overwritten.

Important notice for replacing a system board

Some components mounted on a system board are very sensitive. Improper handling of a system board can cause damage to those components, and may cause a system malfunction.

Attention: When handling a system board:

- Do not drop a system board or apply any excessive force to it.
- Avoid rough handling of any kind.
- Avoid bending a system board and hard pushing to prevent cracking at each BGA (Ball Grid Array) chipset.

How to use error messages

Use the error codes displayed on the screen to diagnose failures. If more than one error code is displayed, begin the diagnosis with the first error code. Whatever causes the first error code may also cause false error codes. If no error code is displayed, see whether the error symptom is listed in the Symptom-to-FRU Index for the computer you are servicing.

Strategy for replacing FRUs for Custom Model Variant (CMV) products

Custom Model Variant (CMV) 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: 1829-W15). A CMV is a special bid offering. Therefore, it is NOT generally announced.

There are three information resources to identify which FRUs are used to support CMV products. These sources are PC Entitlement Warehouse (PEW), eSupport, and the HMM.

Using PC Entitlement Warehouse (PEW)

- **PEW** is the primary source for identifying FRU part numbers and FRU descriptions for the key commodities for CMV 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 CMV products are loaded in PEW under the 4-digit MT and 3-digit model, where model = "fixed part number".
- PEW can be accessed at the following Web site:
<http://w3-3.ibm.com/pc/entitle>
Customers can also access PEW via
<http://www-307.ibm.com/pc/support/site.wss/product.do?template=/warranty/warranty.vm&sitestyle=lenovo>
Click on MACHINE LOOKUP, followed by WARRANTY INFORMATION. Input the MT and the Serial number and the list of key commodities will be 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 IBM® Business Partners can access Eclaim at the following Web site:
<https://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/support>
- To view the key commodities, click on PARTS INFORMATION, then PARTS LOOKUP. Type in the model type and serial number. The key commodities will be 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, type in the machine type and model (Example: 1829-CTO) under QUICK PATH. Under "View by Document Type" select PARTS INFORMATION. Under "Filter by Category" select SERVICE PARTS. Under "Parts Information by Date" select SYSTEM SERVICE PARTS. The list of service parts by description, with applicable machine type model and FRU will be displayed.

Using the HMM

Use the HMM as a back-up to PEW and eSupport to view the complete list of FRUs at the MT Model level. CMVs are custom models and are not found in the HMM.

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 original FRU parts are non compliant, replacement parts can also be non compliant. In all cases if the original FRU parts are RoHS compliant the replacement part must also be RoHS 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 FRUs.

RoHS compliant FRUs have unique FRU part numbers. Before or after the RoHS implementation date, 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 may 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 the order.

Diskette compatibility matrix

The compatibility of each of the drives with the diskettes for it is as follows:

| Diskette drive | Diskette capacity | Compatibility |
|----------------|-------------------|----------------|
| 3.5-inch | 1.0 MB | Read and write |
| | 2.0 MB | Read and write |
| | 4.0 MB | Not compatible |

Safety notices: multilingual translations

In this manual, safety notices appear in English with a page number reference to the appropriate multilingual, translated safety notice found in this section.

The following safety notices are provided in English, French, German, Hebrew, Italian, and Spanish.

Safety notice 1

Before the computer is powered on after FRU replacement, make sure all screws, springs, and other small parts are in place and are not left loose inside the computer. Verify this by shaking the computer and listening for rattling sounds. Metallic parts or metal flakes can cause electrical shorts.

Avant de remettre l'ordinateur sous tension après remplacement d'une unité en clientèle, vérifiez que tous les ressorts, vis et autres pièces sont bien en place et bien fixées. Pour ce faire, secouez l'unité et assurez-vous qu'aucun bruit suspect ne se produit. Des pièces métalliques ou des copeaux de métal pourraient causer un court-circuit.

Bevor nach einem FRU-Austausch der Computer wieder angeschlossen wird, muß sichergestellt werden, daß keine Schrauben, Federn oder andere Kleinteile fehlen oder im Gehäuse vergessen wurden. Der Computer muß geschüttelt und auf Klappergeräusche geprüft werden. Metallteile oder-splitter können Kurzschlüsse erzeugen.

לפני הפעלת המחשב לאחר החלפת FRU יש לוודא שכל הברגים, הקפיצים, וחלקים קטנים אחרים נמצאים במקומם ואינם חופשיים לזוז בתוך המחשב. כדי לוודא זאת, יש לטלטל את המחשב ולהקשיב לגילוי קולות שקשוק. חלקי או שבבי מתכת עלולים לגרום לקצרים חשמליים.

Prima di accendere l'elaboratore dopo che é stata effettuata la sostituzione di una FRU, accertarsi che tutte le viti, le molle e tutte le altri parti di piccole dimensioni siano nella corretta posizione e non siano sparse all'interno dell'elaboratore. Verificare ciò scuotendo l'elaboratore e prestando attenzione ad eventuali rumori; eventuali parti o pezzetti metallici possono provocare cortocircuiti pericolosi.

Antes de encender el sistema despues de sustituir una FRU, compruebe que todos los tornillos, muelles y demás piezas pequeñas se encuentran en su sitio y no se encuentran sueltas dentro del sistema. Compruébelo agitando el sistema y escuchando los posibles ruidos que provocarían. Las piezas metálicas pueden causar cortocircuitos eléctricos.

Safety notice 2



Some standby batteries contain a small amount of nickel and cadmium. Do not disassemble a standby battery, recharge it, throw it into fire or water, or short-circuit it. Dispose of the battery as required by local ordinances or regulations. Use only the battery in the appropriate parts listing. Use of an incorrect battery can result in ignition or explosion of the battery.

Certaines batteries de secours contiennent du nickel et du cadmium. Ne les démontez pas, ne les rechargez pas, ne les exposez ni au feu ni à l'eau. Ne les mettez pas en court-circuit. Pour les mettre au rebut, conformez-vous à la réglementation en vigueur. Lorsque vous remplacez la pile de sauvegarde ou celle de l'horloge temps réel, veillez à n'utiliser que les modèles cités dans la liste de pièces détachées adéquate. Une batterie ou une pile inappropriée risque de prendre feu ou d'exploser.

Die Bereitschaftsbatterie, die sich unter dem Diskettenlaufwerk befindet, kann geringe Mengen Nickel und Cadmium enthalten. Sie darf nur durch die Verkaufsstelle oder den IBM Kundendienst ausgetauscht werden. Sie darf nicht zerlegt, wiederaufgeladen, kurzgeschlossen, oder Feuer oder Wasser ausgesetzt werden. Die Batterie kann schwere Verbrennungen oder Verätzungen verursachen. Bei der Entsorgung die örtlichen Bestimmungen für Sondermüll beachten. Beim Ersetzen der Bereitschafts- oder Systembatterie nur Batterien des Typs verwenden, der in der Ersatzteilliste aufgeführt ist. Der Einsatz falscher Batterien kann zu Entzündung oder Explosion führen.

סוללות המתנה מסוימות מכילות כמויות קטנות של ניקל וקדמיום. אין לפרק סוללת המתנה, לטעון אותה מחדש, להשליך אותה לאש או למים או לקצר אותה. יש לסלק את הסוללה כנדרש על ידי התקנות והחוקים המקומיים. יש להשתמש רק בסוללה המופיעה ברשימת החלקים המתאימה. שימוש בסוללה לא מתאימה עלול לגרום להצתה או התפוצצות של הסוללה.

Alcune batterie di riserva contengono una piccola quantità di nichel e cadmio. Non smontarle, ricaricarle, gettarle nel fuoco o nell'acqua né cortocircuitarle. Smaltirle secondo la normativa in vigore (DPR 915/82, successive disposizioni e disposizioni locali). Quando si sostituisce la batteria dell'RTC (real time clock) o la batteria di supporto, utilizzare soltanto i tipi inseriti nell'appropriato Catalogo parti. L'impiego di una batteria non adatta potrebbe determinare l'incendio o l'esplosione della batteria stessa.

Algunas baterías de reserva contienen una pequeña cantidad de níquel y cadmio. No las desmonte, ni recargue, ni las eche al fuego o al agua ni las cortocircuite. Deséchelas tal como dispone la normativa local. Utilice sólo baterías que se encuentren en la lista de piezas. La utilización de una batería no apropiada puede provocar la ignición o explosión de la misma.

Safety notice 3



The battery pack contains small amounts of nickel. Do not disassemble it, throw it into fire or water, or short-circuit it. Dispose of the battery pack as required by local ordinances or regulations. Use only the battery in the appropriate parts listing when replacing the battery pack. Use of an incorrect battery can result in ignition or explosion of the battery.

La batterie contient du nickel. Ne la démontez pas, ne l'exposez ni au feu ni à l'eau. Ne la mettez pas en court-circuit. Pour la mettre au rebut, conformez-vous à la réglementation en vigueur. Lorsque vous remplacez la batterie, veillez à n'utiliser que les modèles cités dans la liste de pièces détachées adéquate. En effet, une batterie inappropriée risque de prendre feu ou d'exploser.

Akkus enthalten geringe Mengen von Nickel. Sie dürfen nicht zerlegt, wiederaufgeladen, kurzgeschlossen, oder Feuer oder Wasser ausgesetzt werden. Bei der Entsorgung die örtlichen Bestimmungen für Sondermüll beachten. Beim Ersetzen der Batterie nur Batterien des Typs verwenden, der in der Ersatzteilliste aufgeführt ist. Der Einsatz falscher Batterien kann zu Entzündung oder Explosion führen.

מארז הסוללה מכיל כמות קטנה של ניקל
וקדמיום. אין לפרק את מארז הסוללה, להשליך
אותו לאש או למים או לקצר אותו. יש לסלק את
מארז הסוללה כנדרש על ידי התקנות
והחוקים המקומיים. יש להשתמש רק בסוללה
המופיעה ברשימת החלקים המתאימה בזמן החלפת
מארז הסוללה. שימוש בסוללה לא מתאימה עלול
לגרום להצתה או התפוצצות של הסוללה.

La batteria contiene piccole quantità di nichel. Non smontarla, gettarla nel fuoco o nell'acqua né cortocircuitarla. Smaltirla secondo la normativa in vigore (DPR 915/82, successive disposizioni e disposizioni locali). Quando si sostituisce la batteria, utilizzare soltanto i tipi inseriti nell'appropriato Catalogo parti. L'impiego di una batteria non adatta potrebbe determinare l'incendio o l'esplosione della batteria stessa.

Las baterías contienen pequeñas cantidades de níquel. No las desmonte, ni recargue, ni las eche al fuego o al agua ni las cortocircuite. Deséchelas tal como dispone la normativa local. Utilice sólo baterías que se encuentren en la lista de piezas al sustituir la batería. La utilización de una batería no apropiada puede provocar la ignición o explosión de la misma.

Safety notice 4



The lithium battery can cause a fire, an explosion, or a severe burn. Do not recharge it, remove its polarized connector, disassemble it, heat it above 100°C (212°F), incinerate it, or expose its cell contents to water. Dispose of the battery as required by local ordinances or regulations. Use only the battery in the appropriate parts listing. Use of an incorrect battery can result in ignition or explosion of the battery.

La pile de sauvegarde contient du lithium. Elle présente des risques d'incendie, d'explosion ou de brûlures graves. Ne la rechargez pas, ne retirez pas son connecteur polarisé et ne la démontez pas. Ne l'exposez pas à une température supérieure à 100°C, ne la faites pas brûler et n'en exposez pas le contenu à l'eau. Mettez la pile au rebut conformément à la réglementation en vigueur. Une pile inappropriée risque de prendre feu ou d'exploser.

Die Systematterie ist eine Lithiumatterie. Sie kann sich entzünden, explodieren oder schwere Verbrennungen hervorrufen. Batterien dieses Typs dürfen nicht aufgeladen, zerlegt, über 100 C erhitzt oder verbrannt werden. Auch darf ihr Inhalt nicht mit Wasser in Verbindung gebracht oder der zur richtigen Polung angebrachte Verbindungsstecker entfernt werden. Bei der Entsorgung die örtlichen Bestimmungen für Sondermüll beachten. Beim Ersetzen der Batterie nur Batterien des Typs verwenden, der in der Ersatzteilliste aufgeführt ist. Der Einsatz falscher Batterien kann zu Entzündung oder Explosion führen.

סוללת הליתיום עלולה לגרום לשריפה, להתפוצצות או לכוויות קשות. אין לטעון אותה מחדש, לסלק את המחבר המקוטב שלה, לפרק אותה או לחמם אותה לטמפרטורה העולה על 100 מעלות צלזיוס. אין לשרוף את הסוללה ואין לחשוף את תוכן התא למים. יש לסלק את הסוללה בנדרש בתקנות ובחוקים המקומיים. יש להשתמש רק בסוללה המופיעה ברשימת החלקים המתאימים. שימוש בסוללה אחרת עלול לגרום לסכנת שריפה או התפוצצות.

La batteria di supporto e una batteria al litio e puo incendiarsi, esplodere o procurare gravi ustioni. Evitare di ricaricarla, smontarne il connettore polarizzato, smontarla, riscaldarla ad una temperatura superiore ai 100 gradi centigradi, incendiarla o gettarla in acqua. Smaltirla secondo la normativa in vigore (DPR 915/82, successive disposizioni e disposizioni locali). L'impiego di una batteria non adatta potrebbe determinare l'incendio o l'esplosione della batteria stessa.

La batería de repuesto es una batería de litio y puede provocar incendios, explosiones o quemaduras graves. No la recargue, ni quite el conector polarizado, ni la desmonte, ni caliente por encima de los 100°C (212°F), ni la incinere ni exponga el contenido de sus celdas al agua. Deséchela tal como dispone la normativa local.

Safety notice 5

If the LCD breaks and the fluid from inside the LCD gets into your eyes or on your hands, immediately wash the affected areas with water for at least 15 minutes. Seek medical care if any symptoms from the fluid are present after washing.

Si le panneau d'affichage à cristaux liquides se brise et que vous recevez dans les yeux ou sur les mains une partie du fluide, rincez-les abondamment pendant au moins quinze minutes. Consultez un médecin si des symptômes persistent après le lavage.

Die Leuchtstoffröhre im LCD-Bildschirm enthält Quecksilber. Bei der Entsorgung die örtlichen Bestimmungen für Sondermüll beachten. Der LCD-Bildschirm besteht aus Glas und kann zerbrechen, wenn er unsachgemäß behandelt wird oder der Computer auf den Boden fällt. Wenn der Bildschirm beschädigt ist und die darin befindliche Flüssigkeit in Kontakt mit Haut und Augen gerät, sollten die betroffenen Stellen mindestens 15 Minuten mit Wasser abgespült und bei Beschwerden anschließend ein Arzt aufgesucht werden.

אם מסך הגביש הנוזלי (LCD) נשבר והנוזל מתוך המסך בא במגע עם עיניכם או ידיכם, שטפו את האזורים הנגועים מיד במים במשך 15 דקות לפחות. פנו לקבלת עזרה רפואית אם תסמינים הנובעים מהמגע עם הנוזל נמשכים לאחר השטיפה.

Nel caso che caso l'LCD si dovesse rompere ed il liquido in esso contenuto entrasse in contatto con gli occhi o le mani, lavare immediatamente le parti interessate con acqua corrente per almeno 15 minuti; poi consultare un medico se i sintomi dovessero permanere.

Si la LCD se rompe y el fluido de su interior entra en contacto con sus ojos o sus manos, lave inmediatamente las áreas afectadas con agua durante 15 minutos como mínimo. Obtenga atención medica si se presenta algún síntoma del fluido despues de lavarse.

Safety notice 6



To avoid shock, do not remove the plastic cover that protects the lower part of the inverter card.

Afin d'éviter tout risque de choc électrique, ne retirez pas le cache en plastique protégeant la partie inférieure de la carte d'alimentation.

Aus Sicherheitsgründen die Kunststoffabdeckung, die den unteren Teil der Spannungswandlerplatine umgibt, nicht entfernen.

כדי למנוע התחשמלות, אין להסיר את מכסה הפלסטיק המגן על חלקו התחתון של הכרטיס ההפוך.

Per evitare scosse elettriche, non rimuovere la copertura in plastica che avvolge la parte inferiore della scheda invertitore.

Para evitar descargas, no quite la cubierta de plástico que rodea la parte baja de la tarjeta invertida.

Safety notice 7



Though the main batteries have low voltage, a shorted or grounded battery can produce enough current to burn personnel or combustible materials.

Bien que le voltage des batteries principales soit peu élevé, le court-circuit ou la mise à la masse d'une batterie peut produire suffisamment de courant pour brûler des matériaux combustibles ou causer des brûlures corporelles graves.

Obwohl Hauptbatterien eine niedrige Spannung haben, können sie doch bei Kurzschluß oder Erdung genug Strom abgeben, um brennbare Materialien zu entzünden oder Verletzungen bei Personen hervorzurufen.

אף שהסוללות הראשיות הן בעלות מתח נמוך, סוללה מקוצרת או מוארקת עלולה להפיק זרם מספיק לגרימת כוויות או להצתת חומרים דליקים.

Sebbene le batterie di alimentazione siano a basso voltaggio, una batteria in corto circuito o a massa può fornire corrente sufficiente da bruciare materiali combustibili o provocare ustioni ai tecnici di manutenzione.

Aunque las baterías principales tienen un voltaje bajo, una batería cortocircuitada o con contacto a tierra puede producir la corriente suficiente como para quemar material combustible o provocar quemaduras en el personal.

Safety notice 8



Before removing any FRU, power off the computer, unplug all power cords from electrical outlets, remove the battery pack, and then disconnect any interconnecting cables.

Avant de retirer une unité remplaçable en clientèle, mettez le système hors tension, débranchez tous les cordons d'alimentation des socles de prise de courant, retirez la batterie et déconnectez tous les cordons d'interface.

Die Stromzufuhr muß abgeschaltet, alle Stromkabel aus der Steckdose gezogen, der Akku entfernt und alle Verbindungskabel abgenommen sein, bevor eine FRU entfernt wird.

לפני סילוק FRU כלשהו, יש לכבות את המחשב, לנתק את כל כבלי החשמל משקעי החשמל, להוציא את מארז הסוללה, ואז לנתק כבלי חיבור אחרים אם יש כאלה.

Prima di rimuovere qualsiasi FRU, spegnere il sistema, scollegare dalle prese elettriche tutti i cavi di alimentazione, rimuovere la batteria e poi scollegare i cavi di interconnessione.

Antes de quitar una FRU, apague el sistema, desenchufe todos los cables de las tomas de corriente eléctrica, quite la batería y, a continuación, desconecte cualquier cable de conexión entre dispositivos.

Safety information

The following section presents safety information with which you need to be familiar before you service a Lenovo 3000 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. Make sure that 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 object that weighs more than 16 kg (35 lb) or that you think is 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, make sure 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 toolcase 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. Make sure 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, about 8 centimeters (3 inches) from the end.
- Do not wear jewelry, chains, metal-frame eyeglasses, or metal fasteners for your clothing.

Attention: 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.
- Fan louvers on the machine help to prevent overheating of internal components. Do not obstruct fan louvers or cover them with labels or stickers.

Electrical safety

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.
Attention: 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.
Attention: An electrical shock can occur only when there is a complete circuit. 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; Instructions for these precautions 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 purpose of this inspection guide is to assist you in identifying potentially unsafe conditions. As each machine was designed and built, required safety items were installed to protect users and service personnel from injury. This guide addresses only those items. You should use good judgment to identify potential safety hazards due to attachment of non-Lenovo 3000 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 a bulging capacitor
- Mechanical hazards, such as loose or missing hardware

To determine whether there are any potentially unsafe conditions, use the following checklist at the beginning of every service task. 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 the frame ground.
 - b. The power cord should be the type specified in the parts list.
 - c. Insulation must not be frayed or worn.
4. Remove the cover.
5. Check for any obvious non-Lenovo 3000 alterations. Use good judgment as to the safety of any non-Lenovo 3000 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 devices that are sensitive to electrostatic discharge

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 to guard against ESD damage is desirable but not necessary.

- Attach the ESD ground clip to any frame ground, ground braid, or green-wire ground.
- When working on a double-insulated or battery-operated system, use an ESD common ground or reference point. 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.

Laser compliance statement

Some models of Lenovo 3000 computer are equipped from the factory with an optical storage device such as a CD-ROM drive or a DVD-ROM drive. Such devices are also sold separately as options. If one of these drives is installed, it is certified in the U.S. to conform to the requirements of the Department of Health and Human Services 21 Code of Federal Regulations (DHHS 21 CFR) Subchapter J for Class 1 laser products. Elsewhere, the drive is certified to conform to the requirements of the International Electrotechnical Commission (IEC) 825 and CENELEC EN 60 825 for Class 1 laser products.

If a CD-ROM drive, a DVD-ROM drive, or another laser device is installed, note the following:

⚠ CAUTION:

Use of controls or adjustments or performance of procedures other than those specified herein might result in hazardous radiation exposure.

O uso de controles, ajustes ou desempenho de procedimentos diferentes daqueles aqui especificados pode resultar em perigosa exposição à radiação.

凡未在这里指明的任何控制用法、调整、行为，都会导致严重后果。

Pour éviter tout risque d'exposition au rayon laser, respectez les consignes de réglage et d'utilisation des commandes, ainsi que les procédures décrites.

Werden Steuer- und Einstellelemente anders als hier festgesetzt verwendet, kann gefährliche Laserstrahlung auftreten.

Az itt előírt eljárásoktól, beállítástól és vezérlésektől eltérni a lézersugárzás veszélye miatt kockázatos!

L'utilizzo di controlli, regolazioni o l'esecuzione di procedure diverse da quelle specificate possono provocare l'esposizione a.

Использование элементов настройки и выполнение процедур иных, чем указано здесь, может привести к опасному радиационному облучению.

Použitie kontrol, úprav alebo iných vykonaní od iných výrobcov, ako je v tomto špecifikované, mohlo by mať za následok nebezpečenstvo vystavenia sa vyžiarovaniu.

El uso de controles o ajustes o la ejecución de procedimientos distintos de los aquí especificados puede provocar la exposición a radiaciones peligrosas.

Opening the CD-ROM drive, the DVD-ROM drive, or any other optical storage device could result in exposure to hazardous laser radiation. There are no serviceable parts inside those drives. **Do not open.**

Laser compliance statement

A CD-ROM drive, a DVD-ROM drive, or any other storage device installed may contain an embedded Class 3A or Class 3B laser diode. Note the following:

DANGER

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

Radiação por raio laser ao abrir. Não olhe fixo no feixe de luz, não olhe diretamente por meio de instrumentos óticos e evite exposição direta com o feixe de luz.

开启时会有激光发射时，请勿直视激光光束，请勿直接查看视觉仪器，并且避免直接接触在激光光束之中。

Rayonnement laser si carter ouvert. Évitez de fixer le faisceau, de le regarder directement avec des instruments optiques, ou de vous exposer au rayon.

Laserstrahlung bei geöffnetem Gerät. Nicht direkt oder über optische Instrumente in den Laserstrahl sehen und den Strahlungsbereich meiden.

Kinyitáskor lézersugár ! Ne nézzen bele se szabad szemmel, se optikai eszközökkel. Kerülje a sugárnyalábbal való érintkezést !

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

Открывая, берегитесь лазерного излучения. Не смотрите на луч, не разглядывайте его с помощью оптических инструментов, а также избегайте прямого воздействия лазерного луча.

Keď je laserová jednotka otvorená. Vyhnite sa priamemu pohľadu a nehládte priamo s optickými nástrojmi do lúča a vyhnite sa priamemu vystaveniu lúčov.

Radiación láser al abrir. No mire fijamente ni examine con instrumental óptico el haz de luz. Evite la exposición directa al haz.

General descriptions

The descriptions in this chapter apply to any Lenovo 3000 model that has the PC-Doctor[®] for DOS diagnostics program. Some descriptions might not apply to your particular computer.

Read this first

Before you go to the checkout guide, be sure to read this section.

Important notes

- **Only certified trained personnel should service the computer.**
- **Before replacing any FRU, read the entire page on removing and replacing FRUs.**
- **When you replace FRUs, use new nylon-coated screws.**
- **Be extremely careful during such write operations as copying, saving, or formatting.** Drives in the computer that you are servicing sequence might have been altered. If you select an incorrect drive, data or programs might be overwritten.
- **Replace a FRU only with another FRU of the correct model.** When you replace a FRU, make sure that the model of the machine and the FRU part number are correct by referring to the FRU parts list.
- **A FRU should not be replaced because of a single, unreproducible failure.** Single failures can occur for a variety of reasons that have nothing to do with a hardware defect, such as cosmic radiation, electrostatic discharge, or software errors. Consider replacing a FRU only when a problem recurs. If you suspect that a FRU is defective, clear the error log and run the test again. If the error does not recur, do not replace the FRU.
- **Be careful not to replace a nondefective FRU.**

What to do first

When you do return a FRU, you must include the following information in the parts exchange form or parts return form that you attach to it:

- ___ 1. Name and phone number of servicer
- ___ 2. Date of service
- ___ 3. Date on which the machine failed
- ___ 4. Date of purchase
- ___ 5. Failure symptoms, error codes appearing on the display, and beep symptoms
- ___ 6. Procedure index and page number in which the failing FRU was detected
- ___ 7. Failing FRU name and part number
- ___ 8. Machine type, model number, and serial number
- ___ 9. Customer's name and address

Note for warranty:

During the warranty period, the customer may be responsible for repair costs if the computer damage was caused by misuse, accident, modification, unsuitable physical or operating environment, or improper maintenance by the customer.

Read this first

Following is a list of some common items that are not covered under warranty and some symptoms that might indicate that the system was subjected to stress beyond normal use.

Before checking problems with the computer, determine whether the damage is covered under the warranty by referring to the following list:

The following are not covered under warranty:

- LCD panel cracked from the application of excessive force or from being dropped
- Scratched (cosmetic) parts
- Distortion, deformation, or discoloration of the cosmetic parts
- Plastic parts, latches, pins, or connectors that have been cracked or broken by excessive force
- Damage caused by liquid spilled into the system
- Damage caused by the improper insertion of a PC Card or the installation of an incompatible card
- Improper disc insertion or use of an optical drive
- Diskette drive damage caused by pressure on the diskette drive cover, foreign material in the drive, or the insertion of a diskette with multiple labels
- Damaged or bent diskette eject button
- Fuses blown by attachment of a nonsupported device
- Forgotten computer password (making the computer unusable)
- Sticky keys caused by spilling a liquid onto the keyboard
- Use of an incorrect ac adapter on laptop products

The following symptoms might indicate damage caused by nonwarranted activities:

- Missing parts might be a symptom of unauthorized service or modification.
- If the spindle of a hard disk drive becomes noisy, it may have been subjected to excessive force, or dropped.

Related service information

This section provides information about the following:

- “Service Web site”
- “Restoring the factory contents by using Product Recovery discs”
- “Passwords” on page 20
- “Power management” on page 22

Service Web site

When the latest maintenance diskette and the system program service diskette become available, they will be posted on <http://www.lenovo.com/spm>

Restoring the factory contents by using Product Recovery discs

When the hard disk drive is replaced because of a failure, no Product Recovery program is on the new hard disk. In this case, you must use the recovery disc for the computer. Order the recovery disc and the hard disk drive at the same time so that you can recover the new hard disk drive with the preinstalled software when they arrive. For information on which disc to order, see “Recovery discs” on page 138.

To install the factory contents by using Product Recovery discs, do the following:

Note

The recovery process might take up to 2 hours.

1. Make the optical drive the first start up device in the startup sequence.
2. Insert the bootable **Rescue and Recovery™ Startup disc** into the optical drive, and then start the computer.
3. In the Rescue and Recovery workspace, complete the following procedure:
 - a. When the Rescue and Recovery workspace opens, click **Continue** on the Welcome window and then click **Restore your system**.
 - b. When a message about accessing a USB device is displayed, click **OK**.
 - c. In the initial window of the “Restore your system” wizard, select **Restore my hard drive to the original factory state** and click **Next**.
 - d. In the next window, select **I do not want to save any files** and click **Next**.
 - e. A warning opens not to turn off the computer during the recovery process. Click **OK**.
4. When the Product Recovery window opens, click **OK**.
5. The Terms and Conditions window opens, select **I accept these terms and conditions** and then click **OK**.
6. After the files necessary for the product recovery are copied from the Rescue and Recovery Startup disc to the hard drive, the system restarts automatically and boot back into Rescue and Recovery. Remove the disc and turn off the computer.
7. Turn on the computer to continue the recovery process.
8. After you restart the computer, the computer prompts you for a supplemental Rescue and Recovery disc. If you have a supplemental Rescue and Recovery disc, click **OK** and insert the supplemental disc. If you do not have a supplemental disc, click **No**.

9. When prompted, insert the appropriate Product Recovery disc and then click **OK**. The second phase of the recovery process begins.
10. When all of the data has been copied from the last Product Recovery disc in the set, a message is displayed prompting you to restart the computer. Remove the disc and then click **Yes**, then a message is displayed asking you to continue the recovery process. Click **Continue** to restart your computer, then the computer restarts and the third phase of the recovery process begins.
11. When the recovery process is complete, the Welcome to Microsoft® Windows® screen is displayed. Follow the instructions on the screen to complete the Windows setup.

Passwords

As many as three passwords may be needed for any Lenovo 3000 computer: the power-on password (POP), the hard-disk password (HDP), and the supervisor password (SVP).

If any of these passwords has been set, a prompt for it appears on the screen whenever the computer is turned on. The computer does not start until the password is entered.

Exception: If only an SVP is installed, the password prompt does not appear when the operating system is booted.

Power-on password:

A power-on password (POP) protects the system from being powered on by an unauthorized person. The password must be entered before an operating system can be booted.

Hard-disk password:

There are two hard-disk passwords (HDPs):

- User HDP—for the user
- Master HDP—for the system administrator, who can use it to get access to the hard disk even if the user has changed the user HDP

Note: There are two modes for the HDP: **User only** and **Master + User**. The **Master + User** mode requires two HDPs; the system administrator enters both in the same operation. The system administrator then provides the user HDP to the system user.

Attention: If the user HDP has been forgotten, check whether a master HDP has been set. If it has, it can be used for access to the hard disk drive. If no master HDP is available, neither Lenovo nor Lenovo authorized servicers provide any services to reset either the user or the master HDP, or to recover data from the hard disk drive. The hard disk drive can be replaced for a scheduled fee.

Supervisor password:

A supervisor password (SVP) protects the system information stored in the BIOS Setup Utility. The user must enter the SVP in order to get access to the BIOS Setup Utility and change the system configuration.

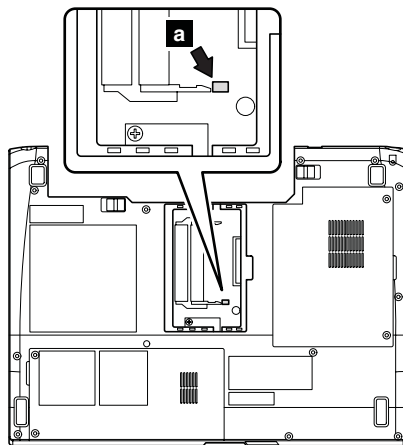
Attention: If the SVP has been forgotten and cannot be made available to the servicer, there is no service procedure to reset the password. The system board must be replaced for a scheduled fee.

How to remove the power-on password

To remove a POP that you have forgotten, do the following:

(A) If no SVP has been set:

1. Turn off the computer.
2. Remove the battery pack.
For how to remove the battery pack, see "1010 Battery pack" on page 46.
3. Remove the DIMM slot cover.
For how to remove the DIMM slot cover, see "1060 DIMM slot cover" on page 53.
4. Remove the DIMM.
For how to remove the DIMM, see "1070 DIMM" on page 54.
5. Short J1 pad (**a**).



6. Reinstall the DIMM and the DIMM slot cover.
7. Reinstall the battery pack.
8. Turn on the computer and wait until the POST ends.
After the POST ends, the password prompt does not appear. The POP has been removed.

(B) If an SVP has been set and is known by the servicer:

1. Turn on the computer; then, while the initial screen is displayed, press the Lenovo CareSM button. The Rescue and Recovery screen opens.
2. Click **Access BIOS**. The System Restart Required window is displayed.
3. Click **Yes**. The computer restarts, and the BIOS Setup Utility screen opens.
4. Select **Security**, using the cursor directional keys to move down the menu.
5. Select **Password**.
6. Select **Power-On Password***1.
7. Type the current SVP in the **Enter Current Password** field. Then leave the **Enter New Password** field blank, and press Enter twice.
8. In the Changes have been saved window, press Enter.
9. Press F10; then, in the Setup confirmation window, select **Yes**.

Note: For some models, the BIOS menu marked *1 is **User Password**.

How to remove the hard-disk password

Attention: If **User only** mode is selected and the user HDP has been forgotten and cannot be made available to the servicer, neither Lenovo nor Lenovo authorized servicers provide any services to reset the user HDPs or to recover data from the hard disk drive. The hard disk drive can be replaced for a scheduled fee.

To remove a user HDP that has been forgotten, when the SVP and the master HDP are known, do the following:

1. Turn on the computer; then, while the initial screen is displayed, press the Lenovo Care button. The Rescue and Recovery screen opens.
2. Click **Access BIOS**. The System Restart Required window is displayed.
3. Click **Yes**. The computer restarts, and the BIOS Setup Utility screen opens.
4. Select **Security**, using the cursor directional keys to move down the menu.
5. Select **Password**.
6. Select **Hard-disk x password**, where *x* is the letter of the hard disk drive. A pop-up window opens.
7. Select **Master HDP**.
8. Type the current master HDP in the **Enter Current Password** field. then leave the **Enter New Password** field blank, and press Enter twice.
9. Press F10.
10. Select **Yes** in the Setup Configuration window.
Both user HDP and master HDP will have been removed.

Power management

Note: Power management modes are not supported for APM operating system.

To reduce power consumption, the computer has three power management modes: screen blank, sleep (standby), and hibernation.

Screen blank mode

If the time set on the “Turn off monitor” timer in the operating system expires, the LCD backlight turns off.

To end screen blank mode and resume normal operation, press any key.

Sleep (standby) mode

When the computer enters sleep (standby) mode, the following events occur in addition to what occurs in screen blank mode:

- The LCD is powered off.
- The hard disk drive is powered off.
- The CPU stops.

To enter sleep (standby) mode, press Fn+F4.

In certain circumstances, the computer goes into sleep (standby) mode automatically:

- If a “suspend time” has been set on the timer, and the user does not do any operation with the keyboard, the hard disk, the parallel connector, or the diskette drive within that time.

- If the battery indicator blinks orange, indicating that the battery power is low. (Alternatively, if **Hibernate when battery becomes low** has been selected in the “Power Management Properties” window, the computer goes into hibernation mode.)

To cause the computer to return from sleep (standby) mode and resume operation, do one of the following:

- Press the Fn key.
- Open the LCD cover.
- Turn on the power switch.

Also, in the following event, the computer automatically returns from sleep (standby) mode and resumes operation:

- The time set on the resume timer elapses.

Note: The computer does not accept any input immediately after it enters sleep (standby) mode. Wait a few seconds before taking any action to reenter operation mode.

Hibernation mode

In hibernation mode, the following occurs:

- The system status, RAM, VRAM, and setup data are stored on the hard disk.
- The system is powered off.

To cause the computer to enter hibernation mode, do any of the following:

- Press the Fn+F12 keys.
- If you are using the ACPI operating system and have defined one of the following actions as the event that causes the system to go into hibernation mode, perform that action.
 - Closing the lid.
 - Pressing the power button.

Also, the computer goes into hibernation mode automatically in either of the following conditions:

- If a “hibernation time” has been set on the timer, and if the user does not do any operation with the keyboard, the hard disk drive, the parallel connector, or the diskette drive within that time.
- If the timer conditions are satisfied in suspend mode.

When the power is turned on, the computer returns from hibernation mode and resumes operation. The hibernation file in the boot record on the hard disk drive is read, and system status is restored from the hard disk drive.

Checkout guide

Use the following procedures as a guide in identifying and correcting problems with the Lenovo 3000 computer.

Note: The diagnostic tests are intended to test only Lenovo 3000 products. The use of non-Lenovo 3000 products, prototype cards, or modified options can lead to false indications of errors and invalid system responses.

1. Identify the failing symptoms in as much detail as possible.
2. Verify the symptoms. Try to re-create the failure by running the diagnostic test or by repeating the operation.

Testing the computer

The Lenovo 3000 computer has a test program called PC-Doctor for DOS (hereafter called *PC-Doctor*.) You can detect errors by running the diagnostics test included in PC-Doctor. This section is an overview of the procedure. For details that depend on model-unique functions, refer to “Product overview” on page 30.

For some possible configurations of the computer, PC-Doctor might not run correctly. To avoid this problem, you need to initialize the computer setup by use of the BIOS Setup Utility before you run PC-Doctor. On the BIOS Setup Utility screen, press F9, Enter, F10, and then Enter.

Note: When you initialize the computer configuration, some devices are disabled, such as the serial port. If you test one of these devices, you will need to enable it by using Configuration utility for DOS. The utility is available on the following Web site: <http://www.lenovo.com/support>

Creating the PC-Doctor diagnostics diskette

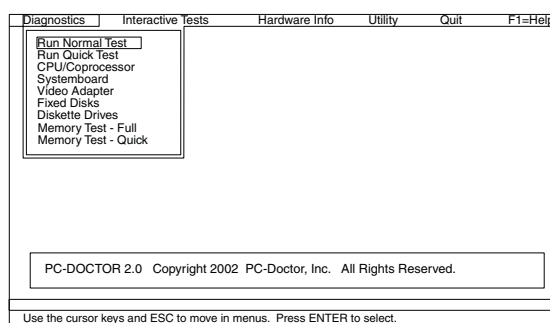
To create the PC-Doctor disk from the Rescue and Recovery workspace, do as follows:

1. Enter the Rescue and Recovery workspace by pressing the Lenovo Care button during POST.
2. When the Rescue and Recovery workspace finishes loading, click **Diagnostic Diskette**.
3. Authenticating the digital signature takes about 15 seconds; then the Lenovo 3000 computer will reboot into PC-DOS.
4. A batch file automatically starts up to prompt you through the process of creating diskettes. You are notified of how many diskettes you will need.
 - a. You are prompted to insert each diskette in sequence.
 - b. Typically, all you need to do is to press the Enter key for the floppy drive; the system then formats and creates the diskette.
 - c. Each diskette is erased and formatted with the PC-Doctor for DOS boot image.
5. Once all the diskettes have been created, the Lenovo 3000 computer will reboot. The user is asked to remove all diskettes from the drive, or to insert the first diskette created if it is desired to run the diagnostics.

To run the test, do as follows:

1. Insert the PC-Doctor disk into the diskette drive; then power on the computer.
 If the computer cannot be powered on, go to "Power system checkout" on page 26, and check the power sources.
 If an error code appears, go to "Symptom-to-FRU index" on page 36.
 On the first screen, select the model and press Enter. Follow the instructions on the screen.
2. The main panel of PC-Doctor appears.
3. Select **Diagnostics** with the arrow keys, and press Enter.
 A pull-down menu appears. (Its exact form depends on the model.)

Note: PC-Doctor menu does not mean the formal support device list. Some unsupported device names may appear in the PC-Doctor menu.



The options on the test menu are as follows:

| Diagnostics | Interactive Tests |
|--|---|
| <ul style="list-style-type: none"> • Run Normal Test • Run Quick Test • CPU/Coprocessor • Systemboard • Video Adapter • Fixed Disks • Diskette Drives • Memory Test – Full • Memory Test – Quick | <ul style="list-style-type: none"> • Keyboard • Video • Mouse • System Load |
| <p>Notes:</p> <ul style="list-style-type: none"> • In the Keyboard test in Interactive Tests, the Fn key should be held down with M key for at least 2 seconds; otherwise, it cannot be sensed. • Video Adapter test supports only the LCD display on the Lenovo 3000 computer. If you have an external monitor attached to your computer, detach it before running PC-Doctor for DOS. | |

4. Run the applicable function test.
5. Follow the instructions on the screen. If there is a problem, PC-Doctor shows messages describing it.
6. To exit the test, select **Quit — Exit Diag.**
 To cancel the test, press Esc.

Note: After running PC-Doctor, check the time and date on the system and reset them if they are incorrect.

Detecting system information with PC-Doctor

PC-Doctor can detect the following system information:

Hardware Info

- System Configuration
- Memory Contents
- Physical Disk Drives
- Logical Disk Drives
- VGA Information
- IDE Drive Info
- PCI Information
- PNPISA Info
- SMBIOS Info
- VESA LCD Info
- Hardware Events Log

Utility

- Run External Tests
- Surface Scan Hard Disk
- Benchmark System
- DOS Shell
- Tech Support Form
- Battery Rundown
- View Test Log
- Print Log
- Save Log
- Full Erase Hard Drive
- Quick Erase Hard Drive

PC-Doctor for Windows

This product is designed to help you troubleshoot and resolve problems related to your computer. Select one of the categories listed below to display symptoms and solutions:

- CHECK SYSTEM HEALTH
- SYSTEM AND DEVICE TESTS
- LENOVO TROUBLESHOOTING
- CENTER
- SYSTEM REPORTS
- UPDATES AND SUPPORT

Power system checkout

To verify a symptom, do the following:

1. Turn off the computer.
2. Remove the battery pack.
3. Connect the ac adapter.
4. Check that power is supplied when you turn on the computer.
5. Turn off the computer.
6. Disconnect the ac adapter and install the charged battery pack.
7. Check that the battery pack supplies power when you turn on the computer.

If you suspect a power problem, see the appropriate one of the following power supply checkouts:

- "Checking the ac adapter" on page 27
- "Checking operational charging" on page 27
- "Checking the battery pack" on page 27

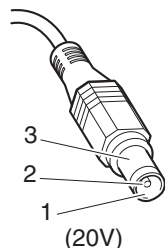
Checking the ac adapter

You are here because the computer fails only when the ac adapter is used.

- If the power-on indicator does not turn on, check the power cord of the ac adapter for correct continuity and installation.
- If the computer does not charge during operation, go to "Checking operational charging."

To check the ac adapter, do the following:

1. Unplug the ac adapter cable from the computer.
2. Measure the output voltage at the plug of the ac adapter cable. See the following figure:



| Pin | Voltage (V dc) |
|-----|----------------|
| 1 | +20 |
| 2 | 0 |
| 3 | Ground |

Note: Output voltage of pin no.2 of the ac adapter may be different from the one you are servicing.

3. If the voltage is not correct, replace the ac adapter.
4. If the voltage is acceptable, do the following:
 - Replace the system board.
 - If the problem persists, go to "Product overview" on page 30.

Note: Noise from the ac adapter does not always indicate a defect.

Checking operational charging

To check whether the battery charges properly during operation, use a discharged battery pack or a battery pack that has less than 50% of the total power remaining when installed in the computer.

Perform operational charging. If the battery status indicator or icon does not turn on, remove the battery pack and let it return to room temperature. Reinstall the battery pack. If the charge indicator or icon still does not turn on, replace the battery pack.

If the charge indicator still does not turn on, replace the system board. Then reinstall the battery pack. If it is still not charged, go to the next section.

Checking the battery pack

Battery charging does not start until the Power Meter shows that less than 95% of the total power remains; under this condition the battery pack can charge to 100% of its capacity. This protects the battery pack from being overcharged or from having a shortened life.

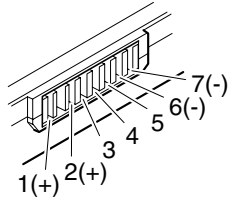
To check your battery, move your cursor to the Power Meter icon in the icon tray of the Windows taskbar and wait for a moment (but do not click), and the percentage of battery power remaining is displayed. To get detailed information about the battery, double-click the Power Meter icon.

Checkout guide

Note: If the battery pack becomes hot, it may not be able to charge. Remove it from the computer and leave it at room temperature for a while. After it cools down, reinstall and recharge it.

To check the battery pack, do the following:

1. Power off the computer.
2. Remove the battery pack and measure the voltage between battery terminals 1 (+) and 7 (-). See the following figure:



| Terminal | Voltage (V dc) |
|----------|----------------|
| 1 | + 0 to + 12.6 |
| 7 | Ground (-) |

3. If the voltage is less than +11.0 V dc, the battery pack has been discharged.

Note: Recharging will take at least 3 hours, even if the indicator does not turn on.

If the voltage is still less than +11.0 V dc after recharging, replace the battery.

4. If the voltage is more than +11.0 V dc, measure the resistance between battery terminals 4 and 7. The resistance must be 4 to 30 K Ω .

If the resistance is not correct, replace the battery pack. If the resistance is correct, replace the system board.

Lenovo 3000 N100 and N200

| | | | |
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| 1030 Hard disk drive | 48 | Windows Vista Home Premium (32 bit) DVDs for MT 0769 | 142 |
| 1040 PCI Express Mini Card for 802.11 a/b/g wireless LAN | 49 | Windows Vista Home Basic (32 bit) DVDs for MT 0689 and 0768 | 143 |
| 1050 PCI Express Mini Card for 802.11 a/b/g/n wireless LAN | 51 | Windows Vista Home Basic (32 bit) DVDs for MT 0769 | 144 |
| 1060 DIMM slot cover | 53 | Windows Vista Business (32 bit) DVDs for MT 0689 and 0768 | 145 |
| 1070 DIMM | 54 | Windows Vista Business (32 bit) DVDs for MT 0769 | 146 |
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Product overview

This section presents the following product-unique information:

- “Specifications”
- “Status indicators” on page 33
- “FRU tests” on page 34
- “Fn key combinations” on page 35

Specifications

The following table lists the specifications of the Lenovo 3000 N100 and N200:

| Feature | Description |
|-----------|---|
| Processor | <ul style="list-style-type: none"> • Intel® Celeron® M processor 410 (1.46 GHz), 1-MB L2 cache (533 MHz) • Intel Celeron M processor 420 (1.60 GHz), 1-MB L2 cache (533 MHz) • Intel Celeron M processor 430 (1.73 GHz), 1-MB L2 cache (533 MHz) • Intel Celeron M processor 540 (1.86 GHz), 1-MB L2 cache (533 MHz) • Intel® Core™ Solo processor T1300 (1.66 GHz), 2-MB L2 cache (667 MHz) • Intel Core Solo processor T1350 (1.86 GHz), 2-MB L2 cache (533 MHz) • Intel Core Solo processor T1400 (1.83 GHz), 2-MB L2 cache (667 MHz) • Intel Core Duo processor T2050 (1.60 GHz), 2-MB L2 cache (533 MHz) • Intel Core Duo processor T2060 (1.60 GHz), 2-MB L2 cache (533 MHz) • Intel Core Duo processor T2300 (1.66 GHz), 2-MB L2 cache (667 MHz) • Intel Core Duo processor T2300E (1.66 GHz), 2-MB L2 cache (667 MHz) • Intel Core Duo processor T2350 (1.86 GHz), 2-MB L2 cache (667 MHz) • Intel Core Duo processor T2400 (1.83 GHz), 2-MB L2 cache (667 MHz) • Intel Core Duo processor T2500 (2.0 GHz), 2-MB L2 cache (667 MHz) • Intel Core Duo processor T2600 (2.16 GHz), 2-MB L2 cache (667 MHz) • Intel Core 2 Duo processor T5500 (1.66 GHz), 2-MB L2 cache (667 MHz) • Intel Core 2 Duo processor T5600 (1.83 GHz), 2-MB L2 cache (667 MHz) • Intel Core 2 Duo processor T7100 (1.83 GHz), 2-MB L2 cache (800MHz) • Intel Core 2 Duo processor T7200 (2.0 GHz), 4-MB L2 cache (667 MHz) • Intel Core 2 Duo processor T7300 (2.0 GHz), 4-MB L2 cache (800 MHz) • Intel Core 2 Duo processor T7500 (2.2 GHz), 4-MB L2 cache (800 MHz) |

(continued)

| Feature | Description |
|---------------------|--|
| Bus architecture | <ul style="list-style-type: none"> • 667-MHz PSB • 667-MHz DDR2 SDRAM (PC2-5300) • HUB link • PCI bus • LPC bus • PCI Express bus |
| Graphic memory chip | <ul style="list-style-type: none"> • Intel 945GM/PM • Intel 965GM/PM • NVIDIA G72M-V (GO 7300) |
| Display | <ul style="list-style-type: none"> • 14.1-inch wide, 16M colors, WXGA (1280 × 768 resolution) TFT color LCD • 15.4-inch, 16M colors, WXGA (1280 × 800 resolution) TFT color LCD • 15.4-inch, 16M colors, WSXGA+ (1680 × 1050 resolution) TFT color LCD |
| Standard memory | <ul style="list-style-type: none"> • 256-MB DDR2-667 SDRAM SO-DIMM (PC2-5300) card × 1 • 512-MB DDR2-667 SDRAM SO-DIMM (PC2-5300) card × 1 • 512-MB DDR2-667 SDRAM SO-DIMM (PC2-5300) card × 2 • 1-GB DDR2-667 SDRAM SO-DIMM (PC2-5300) card × 1 • 1-GB DDR2-667 SDRAM SO-DIMM (PC2-5300) card × 2 |
| Optional memory | <ul style="list-style-type: none"> • 256-MB DDR2-667 SDRAM SO-DIMM (PC2-5300) card × 1 • 512-MB DDR2-667 SDRAM SO-DIMM (PC2-5300) card × 1 • 1-GB DDR2-667 SDRAM SO-DIMM (PC2-5300) card × 1 • 2-GB DDR2-667 SDRAM SO-DIMM (PC2-5300) card × 1 (maximum of 2.0 GB) |
| CMOS RAM | <ul style="list-style-type: none"> • 242 bytes |
| Hard disk drive | <ul style="list-style-type: none"> • 40 GB, 5400 rpm, 9.5 mm high, SATA interface • 60 GB, 5400 rpm, 9.5 mm high, SATA interface • 80 GB, 5400 rpm, 9.5 mm high, SATA interface • 100 GB, 5400 rpm, 9.5 mm high, SATA interface • 120 GB, 5400 rpm, 9.5 mm high, SATA interface • 160 GB, 5400 rpm, 9.5 mm high, SATA interface <p>Supported hard disk drives are depend on the model.</p> |
| Optical drive | <ul style="list-style-type: none"> • CD-ROM drive, 12.7 mm high • DVD/CD-RW combo drive, 12.7 mm high • DVD-RAM/RW drive, 12.7 mm high |
| I/O port | <ul style="list-style-type: none"> • 5-in-1 Digital Media Reader • External monitor connector • Stereo headphone jack • Monaural microphone jack • RJ11 connector • RJ45 connector • TV-out connector (S-Video) • Universal serial bus (USB) connector × 4 (compatible with USB 1.1 and 2.0) • IEEE 1394 connector |
| Internal modem | <ul style="list-style-type: none"> • 56.6 Kbps |
| Audio | <ul style="list-style-type: none"> • Built-in stereo speakers • Software control volume |

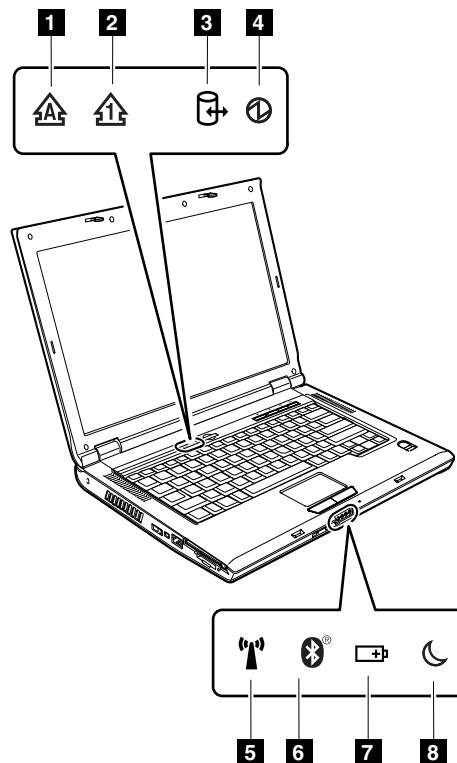
(continued)






Product overview

| Feature | Description |
|---|--|
| Ethernet (on the system board) | <ul style="list-style-type: none"> • 10/100 Ethernet |
| Mini PCI adapter | <ul style="list-style-type: none"> • Intel PRO Wireless 3945ABG Mini-PCI Express Adapter • Broadcom 802.11ag WLAN PCI-E Mini Card • Broadcom 802.11bg WLAN PCI-E Mini Card • Lenovo 11a/b/g/n Wireless LAN Mini-PCI Express Adapter • Intel Wireless WiFi Link 4965AGN |
| PC Card slot for MT 0689 and 0768 | <ul style="list-style-type: none"> • PC Card (Type-II) × 1 |
| ExpressCard slot for MT 0769 | <ul style="list-style-type: none"> • ExpressCard slot |
| <i>Bluetooth</i> wireless (some models) | <ul style="list-style-type: none"> • <i>Bluetooth</i> daughter card |
| Modem | <ul style="list-style-type: none"> • MDC-1.5, 56 kbps V.92 |
| Touch pad | Yes |
| Battery | <ul style="list-style-type: none"> • Li-ion battery (6 cells) 2.2 Ah • Li-ion battery (9 cells) 2.2 Ah |
| AC adapter | <ul style="list-style-type: none"> • 65-watt (20 V) slim type • 90-watt (20 V) type |
| Preinstalled operating system | <ul style="list-style-type: none"> • Windows XP Professional • Windows XP Home Edition • Windows Vista™ Home Premium (32 bit) • Windows Vista Home Basic (32 bit) • Windows Vista Business (32 bit) • Windows Vista Business (64 bit) • Windows Vista Ultimate (32 bit) |




Status indicators

The system status indicators show the status of the computer, as follows:



| Indicator | Meaning |
|---|--|
| 1 Caps lock  | Caps Lock mode is enabled. You can enter all alphabetic characters (A-Z) in uppercase without pressing the Shift key. To enable or disable Caps Lock mode, press the CapsLk key. |
| 2 Num lock  | The numeric keypad on the keyboard is enabled. To enable or disable the keypad, press and hold the Fn key, and press the NmLk key. |
| 3 Drive in use  | Green: Data is being read from or written to the hard disk drive. When this indicator is on, do not put the computer into sleep (standby) mode or turn off the computer. Note: Do not move the system while the green drive-in-use light is on. Sudden physical shock could cause drive errors. |
| 4 Power on  | Green: The computer is on and ready to use. This indicator stays lit whenever the computer is on and is not in sleep (standby) mode. |
| 5 Wireless status  | Green: The wireless feature (the IEEE 802.11 standard or the IEEE802.11n) is on, and the radio link is ready for use. Blinking green: Data is being transmitted. |

(continued)

| Indicator | Meaning |
|--|--|
| 6 Bluetooth status  | Green: Bluetooth wireless is operational. This indicator is on when Bluetooth wireless is on and not in suspend mode. |
| 7 Battery status  | Green: The battery is charged between 80% to 100% of the capacity, and being discharged between 0% to 80% of the capacity. Blinking green: The battery is charged between 20% to 80% of the capacity, and being charged. Orange: The battery is charged between 5% and 20% of the capacity, and being discharged. Blinking orange (slow): The battery is charged between 5% to 20% of the capacity, and being charged. Blinking orange (rapid): The battery is charged between 0% to 5% of the capacity. |
| 8 Sleep (standby) status  | Green: The computer is in sleep (standby) mode. Blinking green: The computer is entering sleep (standby) mode or hibernation mode, or is resuming normal operation. |

FRU tests

The following table shows the test for each FRU.

| FRU | Applicable test |
|-----------------|--|
| System board | 1. Diagnostics --> CPU/Coprocessor 2. Diagnostics --> Systemboard |
| LCD unit | 1. Diagnostics --> Video Adapter 2. Interactive Tests --> Video |
| Keyboard | 1. Diagnostics --> Systemboard --> Keyboard 2. Interactive Tests --> Keyboard |
| Hard disk drive | Diagnostics --> Fixed Disks |
| Diskette drive | • Diagnostics --> Diskette Drives |
| Memory | 1. If two DIMMs are installed, remove one of them and run Diagnostics --> Memory Test—Quick . 2. If the problem does not recur, return the DIMM to its place, remove the other one, and run the test again. 3. If the test does not detect the error, run Diagnostics --> Memory Test—Full . |

Fn key combinations

The following table shows the function of each combination of Fn with a function key.

| Key combination | Description |
|-----------------|--|
| Fn+F1 | Volume down. |
| Fn+F2 | Volume up. |
| Fn+F3 | Reserved. |
| Fn+F4 | Put the computer in sleep (standby) mode. To return to normal operation, press the Fn key only, without pressing a function key. |
| Fn+F5 | Enable or disable the built-in wireless networking features and the <i>Bluetooth</i> features. If you press Fn+F5, a list of wireless features is displayed. You can quickly change the power state of each feature in the list. |
| Fn+F6 | Reserved. |
| Fn+F7 | Open the window for Choose Presentation or Display scheme. If you press this combination of keys, a list of schemes is displayed in the window. You can quickly select a scheme in the list. |
| Fn+F8 | Reserved. |
| Fn+F9 | Reserved. |
| Fn+F10 | Make the computer display less bright. |
| Fn+F11 | Make the computer display brighter. |
| Fn+F12 | Put the computer into hibernation mode. To return to normal operation, press the power button. |
| Fn+Esc | Mute the sound from the computer. |
| Fn+Insert | Scroll Lock (ScrLk). |
| Fn+Delete | Numeric Lock (NmLk) |
| Fn+PrtSc | Has the same function as the SysRq key. |
| Fn+Pause | Has the same function as the Break key. |
| Fn+PgUp | Has the same function as the Home key. |
| Fn+PgDn | Has the same function as the End key. |
| Fn+cursor keys | These key combinations work with Windows Media Player. Fn+down arrow key works for the Play or Pause button, Fn+up arrow key for the Stop button, Fn+right arrow key for the Next Track button, and Fn+left arrow key for the Previous Track button. |

Symptom-to-FRU index

The symptom-to-FRU index in this section lists symptoms and errors and their possible causes. The most likely cause is listed first, in boldface type.

Note: Do the FRU replacement or other actions in the sequence shown in the column headed “FRU or action, in sequence.” If replacing a FRU does not solve the problem, put the original part back in the computer. Do not replace a nondefective FRU.

This index can also help you determine, during regular servicing, what FRUs are likely to need to be replaced next.

A numeric error is displayed for each error detected in POST or system operation. In the displays, **n** can be any number.

If no numeric code is displayed, check the narrative descriptions of symptoms. If the symptom is not described there, go to “Intermittent problems” on page 41.

Note

For a device not supported by diagnostic codes in the Lenovo 3000 notebook computers, see the manual for that device.

Numeric error codes

| Symptom or error | FRU or action, in sequence |
|---|---|
| 0200 Failure Fixed Disk | <ol style="list-style-type: none"> Reseat the hard disk drive. Load Setup Defaults in BIOS Setup Utility. Hard disk drive. System board. |
| 021x Keyboard error | <ol style="list-style-type: none"> Keyboard. System board. |
| 0220 Monitor type does not match CMOS—Run SETUP | Load Setup Defaults in BIOS Setup Utility. |
| 0230 Shadow RAM Failed at offset:nnnn | System board. |
| 0231 System RAM Failed at offset:nnnn | <ol style="list-style-type: none"> DIMM. System board. |
| 0232 Extended RAM Failed at offset:nnnn | <ol style="list-style-type: none"> DIMM. System board. |
| 0250 System battery is dead—Replace and run SETUP | <ol style="list-style-type: none"> Charge the backup battery for more than 8 hours by connecting the ac adapter. Replace the backup battery and run BIOS Setup Utility to reset the time and date. |
| 0251 System CMOS checksum bad—Default configuration use | <ol style="list-style-type: none"> Charge the backup battery for more than 8 hours by connecting the ac adapter. Replace the backup battery and run BIOS Setup Utility to reset the time and date. |

| Symptom or error | FRU or action, in sequence |
|---|---|
| 0260 System timer error | <ol style="list-style-type: none"> 1. Charge the backup battery for more than 8 hours by connecting the ac adapter. 2. Replace the backup battery and run BIOS Setup Utility to reset the time and date. 3. System board. |
| 0270 Real time clock error | <ol style="list-style-type: none"> 1. Charge the backup battery for more than 8 hours by connecting the ac adapter. 2. Replace the backup battery and run BIOS Setup Utility to reset the time and date. 3. System board. |
| 0280 Previous boot incomplete— Default configuration used | <ol style="list-style-type: none"> 1. Load “Setup Default” in BIOS Setup Utility. 2. DIMM. 3. System board. |
| 02F4 EISA CMOS not writable | <ol style="list-style-type: none"> 1. Load Setup Defaults in BIOS Setup Utility. 2. Replace the backup battery. 3. System board. |
| 02F5 DMA test failed | <ol style="list-style-type: none"> 1. DIMM. 2. System board. |
| 02F6 Software NMI failed | <ol style="list-style-type: none"> 1. DIMM. 2. System board. |
| 02F7 Fail-safe timer NMI failed | <ol style="list-style-type: none"> 1. DIMM. 2. System board. |

Error messages

| Symptom or error | FRU or action, in sequence |
|---|---|
| Unsupported memory. | DIMM. Make sure to use supported memory. |
| Device address conflict. | <ol style="list-style-type: none"> 1. Load "Setup Defaults" in the BIOS Setup Utility. 2. Backup battery. 3. System board. |
| Allocation error for device. | <ol style="list-style-type: none"> 1. Load "Setup Defaults" in the BIOS Setup Utility. 2. Backup battery. 3. System board. |
| Failing bits: nnnn. | <ol style="list-style-type: none"> 1. DIMM. 2. System board. |
| Invalid system configuration data. | <ol style="list-style-type: none"> 1. DIMM. 2. System board. |
| I/O device IRQ conflict. | <ol style="list-style-type: none"> 1. Load "Setup Defaults" in the BIOS Setup Utility. 2. Backup battery. 3. System board. |
| Hibernation error. | <ol style="list-style-type: none"> 1. Restore the system configuration to what it was before the computer entered hibernation mode. 2. If memory size has been changed, re-create the hibernation file. |
| Fan error. | <ol style="list-style-type: none"> 1. Fan. 2. Thermal grease. 3. System board. |
| Thermal sensing error. | System board. |
| Authentication of system services failed. Press <Esc> to resume. | The Predesktop Area in the HDD is corrupted. Restore it from a recovery disc. |
| Cannot boot from any device. | <p>Check the status of device which you want to boot from.</p> <p>Device not found.</p> <ol style="list-style-type: none"> 1. The device you want to boot from. 2. System board. <p>Device Error.</p> <ol style="list-style-type: none"> 1. The device you want to boot from. 2. System board. <p>No valid operating system.</p> <ol style="list-style-type: none"> 1. Check that the operating system has no failure and is installed correctly. 2. Reinstall the operation system. <p>Excluded from boot order.</p> <ul style="list-style-type: none"> • Enter the BIOS Setup Utility and add the device in boot order. |

Beep symptoms

| Symptom or error | FRU or action, in sequence |
|--|---|
| One beep and a blank, unreadable, or flashing LCD. | <ol style="list-style-type: none"> 1. Reseat the LCD connector. 2. LCD assembly. 3. External CRT. 4. System board. |
| One long and two short beeps, and a blank or unreadable LCD. | <ol style="list-style-type: none"> 1. System board. 2. LCD assembly. 3. DIMM. |
| Two short beeps with error codes. | POST error. See “Numeric error codes” on page 36. |
| Two short beeps and a blank screen. | <ol style="list-style-type: none"> 1. System board. 2. DIMM. |
| Three short beeps, pause, three more short beeps, and one short beep. | <ol style="list-style-type: none"> 1. DIMM. 2. System board |
| One short beep, pause, three short beeps, pause, three more short beeps, and one short beep. | |
| Only the cursor appears. | Reinstall the operating system. |
| Four cycles of four short beeps and a blank screen. | System board (security chip) |
| Five short beeps and a blank screen. | System board |

No-beep symptoms

| Symptom or error | FRU or action, in sequence |
|--|--|
| No beep, power-on indicator on, LCD blank, and no POST. | <ol style="list-style-type: none"> 1. Make sure that every connector is connected tightly and correctly. 2. DIMM. 3. System board. |
| No beep, power-on indicator on, and LCD blank during POST. | <ol style="list-style-type: none"> 1. Reseat DIMM. 2. System board. |
| The power-on password prompt appears. | A power-on password or a supervisor password is set. Type the password and press Enter . |
| The hard-disk password prompt appears. | A hard-disk password is set. Type the password and press Enter . |

LCD-related symptoms

Important

The TFT LCD for the notebook computer contains many thin-film transistors (TFTs). The presence of a small number of dots that are missing, discolored, or always lighted is characteristic of TFT LCD technology, but excessive pixel problems can cause viewing concerns. The LCD should be replaced if the number of missing, discolored, or lighted dots in any background is:

- **WXGA:** 8 or more bright dots, 8 or more dark dots, or a total of 9 or more bright and dark dots.
- **WSXGA+:** 11 or more bright dots, 13 or more dark dots, or a total of 16 or more bright and dark dots.

Note: A bright dot means a pixel is always on (white or color.) A dark dot means a pixel is always off (black color.)

| Symptom or error | FRU or action, in sequence |
|---|---|
| No beep, power-on indicator on, and a blank LCD during POST. | System board. |
| <ul style="list-style-type: none"> • LCD backlight not working. • LCD too dark. • LCD brightness cannot be adjusted. • LCD contrast cannot be adjusted. | <ol style="list-style-type: none"> 1. Reseat the LCD connectors. 2. LCD assembly. 3. System board. |
| <ul style="list-style-type: none"> • LCD screen unreadable. • Characters missing pixels. • Screen abnormal. • Wrong color displayed. | <ol style="list-style-type: none"> 1. See important note for “LCD-related symptoms.” 2. Reseat all LCD connectors. 3. LCD assembly. 4. System board. |
| Horizontal or vertical lines displayed on LCD. | LCD assembly. |

Intermittent problems

Intermittent system hang problems can be due to a variety of causes that have nothing to do with a hardware defect, such as cosmic radiation, electrostatic discharge, or software errors. FRU replacement should be considered only when a problem recurs.

When analyzing an intermittent problem, do the following:

1. Run the diagnostic test for the system board in loop mode **at least 10 times**.
2. If no error is detected, do **not** replace any FRUs.
3. If any error is detected, replace the FRU shown by the FRU code. Rerun the test to verify that no more errors exist.

Undetermined problems

If the diagnostic tests did not identify the adapter or device that has failed, if wrong devices are installed, or if the system simply is not operating, follow these procedures to isolate the failing FRU (do not isolate FRUs that have no defects).

Verify that all attached devices are supported by the computer.

Verify that the power supply being used at the time of the failure is operating correctly. (See "Power system checkout" on page 26.)

1. Turn off the computer.
2. Visually check each FRU for damage. Replace any damaged FRU.
3. Remove or disconnect all of the following devices:
 - a. Non-Lenovo 3000 devices
 - b. Devices attached to the port replicator
 - c. Printer, mouse, and other external devices
 - d. Battery pack
 - e. Hard disk drive
 - f. External diskette drive or optical drive
 - g. DIMM
 - h. Optical disk or diskette in the internal drive
 - i. PC Cards
4. Turn on the computer.
5. Determine whether the problem has been solved.
6. If the problem does not recur, reconnect the removed devices one at a time until you find the failing FRU.
7. If the problem remains, replace the following FRUs one at a time (do not replace a nondefective FRU):
 - a. System board
 - b. LCD assembly

FRU replacement notices

This section contains notices related to removing and replacing parts. Read this section carefully before replacing any FRU.

Screw notices

Loose screws can cause a reliability problem. In the Lenovo 3000 computer, this problem is addressed with special nylon-coated screws that have the following characteristics:

- They maintain tight connections.
- They do not easily come loose, even with shock or vibration.
- They are harder to tighten.
- Each one should be used only once.

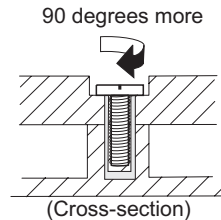
Do the following when you service this machine:

- Keep the screw kit (for the P/N, see “Miscellaneous parts” on page 152) in your tool bag.
- Always use new screws.
- Use a torque screwdriver if you have one.

Tighten screws as follows:

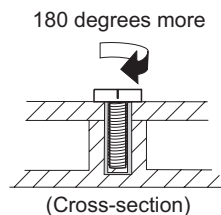
- **Plastic to plastic**

Turn an additional **90 degrees** after the screw head touches the surface of the plastic part:



- **Logic card to plastic**

Turn an additional **180 degrees** after the screw head touches the surface of the logic card:



- **Torque driver**

If you have a torque driver, refer to the “Torque” column for each step.

- Make sure that you use the correct screw. If you have a torque screwdriver, tighten all screws firmly to the torque shown in the table. **Never use a screw that you removed. Use a new one. Make sure that all of the screws are tightened firmly.**
- Ensure torque screwdrivers are calibrated correctly following country specifications.

Retaining serial numbers

This section includes the following descriptions:

- “Restoring the serial number of the system unit” on page 43

- “Retaining the UUID”
- “Reading or writing the ECA information”

Restoring the serial number of the system unit

When the computer was manufactured, the EEPROM on the system board was loaded with the serial numbers of the system and all major components. These numbers need to remain the same throughout the life of the computer.

If you replace the system board, you must restore the serial number of the system unit to its original value.

Before replacing the system board, save the original serial number by doing the following:

1. Install the CE Utility Diskette for Lenovo 3000 notebooks, and restart the computer.
2. From the main menu, select **1. Set System Identification**.
3. Select **2. Read S/N data from EEPROM**.

The serial number of each device in your computer is displayed; the serial number of the system unit is listed as follows:

- 20: Serial number

Write down that number.

Note: The serial number of the system unit is also written on the label attached to the bottom of the computer.

After you have replaced the system board, restore the serial number by doing the following:

1. Install the CE Utility Diskette for Lenovo 3000 notebooks and restart the computer.
2. From the main menu, select **1. Set System Identification**.
3. Select **1. Add S/N data from EEPROM**.
Follow the instructions on the screen.

Retaining the UUID

The Universally Unique Identifier (UUID) is a 128-bit number uniquely assigned to your computer at production and stored in the EEPROM of your system board. The algorithm that generates the number is designed to provide unique IDs until the year A.D. 3400. No two computers in the world have the same number.

When you replace the system board, you must set the UUID on the new system board as follows:

1. Install the CE Utility Diskette for Lenovo 3000 notebooks, and restart the computer.
2. From the main menu, select **4. Assign UUID**.

A new UUID is created and written. If a valid UUID already exists, it is not overwritten.

Reading or writing the ECA information

Information on Engineering Change Announcements (ECA) are stored in the EEPROM of the system board. The electronic storage of this information simplifies the procedure to check if the ECA has been previously applied to a machine. The machine does not need to be disassembled to check for the ECA application.

To check what ECAs have been previously applied to the machine, use the ECA Information Read/Write function on the CE Utility Diskette for Lenovo 3000 notebooks.

1. Insert the CE Utility Diskette for Lenovo 3000 notebooks, and restart the computer.
2. From the main menu, select **6. Set ECA Information**.
3. To read ECA information, select **2. Read ECA/rework number from EEPROM** and follow the instruction.
4. To read box build date, select **5. Read box build date from EEPROM**, and follow the instruction on the screen.

After an ECA has been applied to the machine, the EEPROM must be updated to reflect the ECA's application. Use the CE Utility Diskette for Lenovo 3000 notebooks to update the EEPROM.

Note: Only the ECA number is stored in the EEPROM. The machine type of the ECA is assumed be the same as the machine type of the machine that had the ECA applied to it.

1. Insert the CE Utility Diskette for Lenovo 3000 notebooks, and restart the computer.
2. From the main menu, select **6. Set ECA Information**.
3. To write ECA information, select **1. Write ECA/rework number from EEPROM**, and follow the instruction.
4. To write box build date, select **4. Write box build date from EEPROM**, and follow the instruction on the screen.

If the system board is being replaced, try to read the ECA information from the old system board and transfer the information to the new system. If the system board is inoperable, this will not be possible.

Removing and replacing a FRU

This section presents directions and drawings for use in removing and replacing a FRU. Be sure to observe the following general rules:

1. Do not try to service any computer unless you have been trained and certified. An untrained person runs the risk of damaging parts.
2. Before replacing any FRU, review “FRU replacement notices” on page 42.
3. Begin by removing any FRUs that have to be removed before the failing FRU. Any such FRUs are listed at the top of the page. Remove them in the order in which they are listed.
4. Follow the correct sequence in the steps for removing the FRU, as given in the drawings by the numbers in square callouts.
5. When turning a screw to replace a FRU, turn it in the direction as given by the arrow in the drawing.
6. When removing the FRU, move it in the direction as given by the arrow in the drawing.
7. To put the new FRU in place, reverse the removal procedure and follow any notes that pertain to replacement. For information about connecting and arranging internal cables, see “Locations” on page 104.
8. When replacing a FRU, use the correct screw as shown in the procedures.

 **DANGER**

Before removing any FRU, turn off the computer, unplug all power cords from electrical outlets, remove the battery pack, and then disconnect any interconnecting cables.

Attention: After replacing a FRU, do not turn on the computer until you have made sure that all screws, springs, and other small parts are in place and none are loose inside the computer. Verify this by shaking the computer gently and listening for rattling sounds. Metallic parts or metal flakes can cause electrical short circuits.

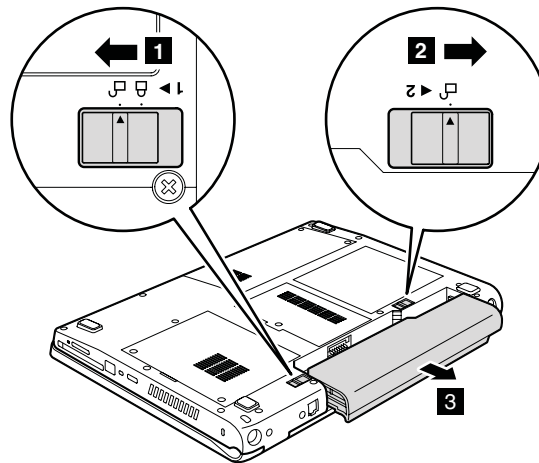
Attention: The system board is sensitive to, and can be damaged by, electrostatic discharge. Before touching it, establish personal grounding by touching a ground point with one hand or by using an electrostatic discharge (ESD) strap (P/N 6405959).

1010 Battery pack

⚠ DANGER

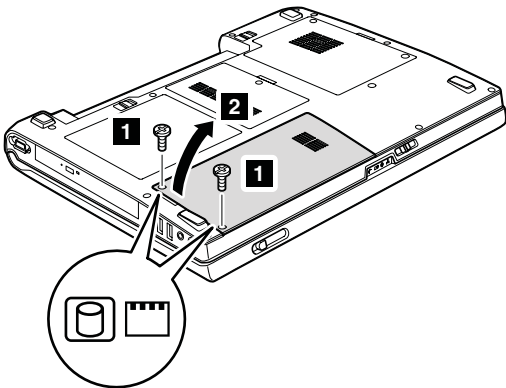
Use only the battery specified in the parts list for your computer. Any other battery could ignite or explode.

Unlock the battery release lever **1** and holding the battery release lever in the unlocked position **2**, remove the battery pack in the direction shown by arrow **3**.



1020 Hard disk drive slot cover

For access, remove this FRU:
• "1010 Battery pack" on page 46



For MT 0689 and 0768

| Step | Screw (quantity) | Color | Torque |
|----------|--|--------|-----------------------|
| 1 | M2.5 × 4 mm, flat-head, nylon-coated (2) | Silver | 0.392 Nm (4 kgfcm) |

For MT 0769

| Step | Screw (quantity) | Color | Torque |
|----------|---|--------|-----------------------|
| 1 | M2.5 × 4 mm, pan-head, nylon-coated (2) | Silver | 0.392 Nm (4 kgfcm) |

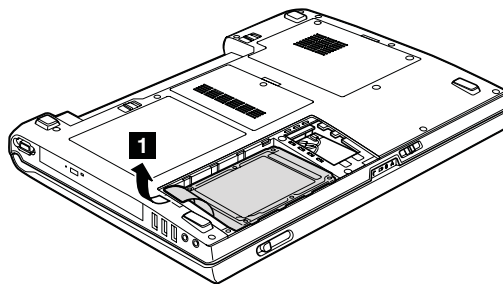
1030 Hard disk drive

For access, remove these FRUs in order:

- “1010 Battery pack” on page 46
- “1020 Hard disk drive slot cover” on page 47

Attention

- **Do not drop the hard disk drive or apply any physical shock to it.** The hard disk drive is sensitive to physical shock. Improper handling can cause damage and permanent loss of data.
- Before removing the drive, have the user make a backup copy of all the information on it if possible.
- Never remove the drive while the system is operating or is in suspend mode.



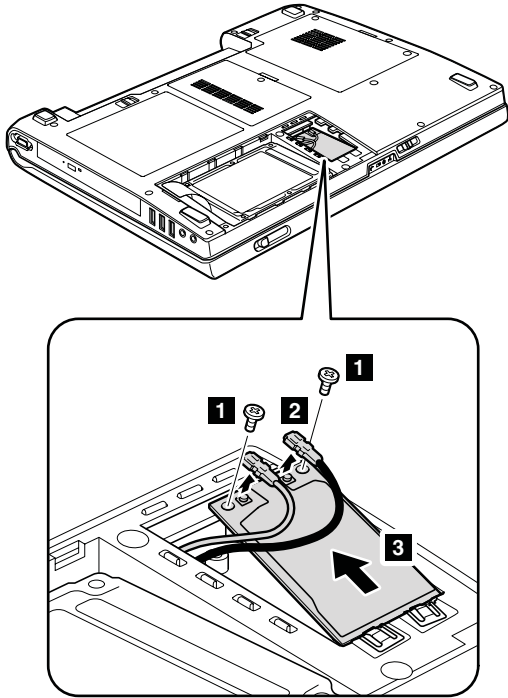
When installing: Make sure that the hard disk drive connector is attached firmly.

1040 PCI Express Mini Card for 802.11 a/b/g wireless LAN

For access, remove these FRUs in order:

- "1010 Battery pack" on page 46
- "1020 Hard disk drive slot cover" on page 47

For MT 0689 and 0768



| Step | Screw (quantity) | Color | Torque |
|----------|--|-------|-------------------------|
| 1 | M2 × 4 mm, flat-head, nylon-coated (2) | Black | 0.245 Nm (2.5 kgfcm) |

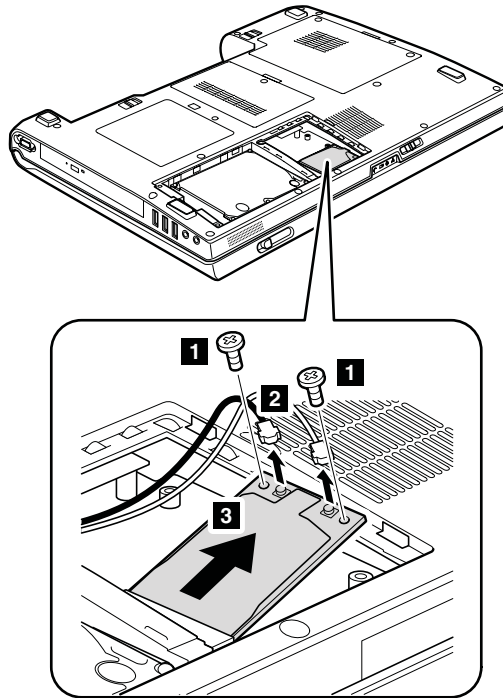
In step **2**, unplug the jacks by using the removal tool antenna RF connector (P/N: 08K7159) or pick the connectors with your fingers and gently unplug them in direction of the arrow.

When installing: Plug the white cable into the jack labeled **MAIN** on the card, and the black cable into the jack labeled **AUX**.

(continued)

Removing and replacing a FRU

For MT 0769



| Step | Screw (quantity) | Color | Torque |
|----------|---|--------|-----------------------|
| 1 | M2.5 × 3 mm, pan-head, nylon-coated (2) | Silver | 0.392 Nm (4 kgfcm) |

In step **2**, unplug the jacks by using the removal tool antenna RF connector (P/N: 08K7159) or pick the connectors with your fingers and gently unplug them in direction of the arrow.

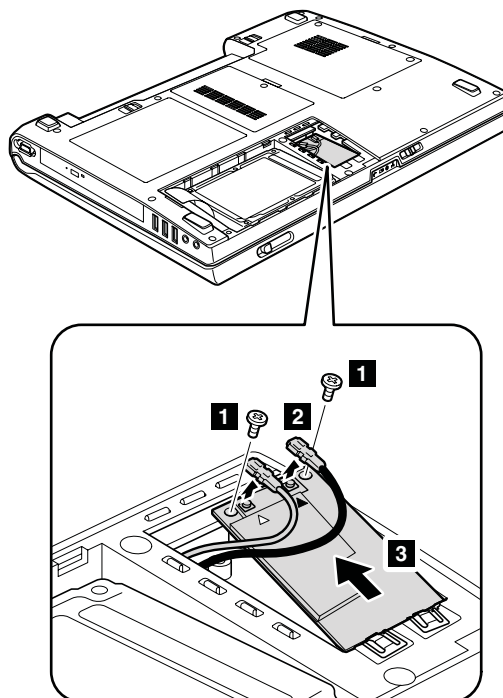
When installing: Plug the black cable into the jack labeled **MAIN** on the card, and the white cable into the jack labeled **AUX**.

1050 PCI Express Mini Card for 802.11 a/b/g/n wireless LAN

For access, remove these FRUs in order:



- "1010 Battery pack" on page 46
- "1020 Hard disk drive slot cover" on page 47

For MT 0689 and 0768



| Step | Screw (quantity) | Color | Torque |
|----------|--|-------|-------------------------|
| 1 | M2 × 4 mm, flat-head, nylon-coated (2) | Black | 0.245 Nm (2.5 kgfcm) |

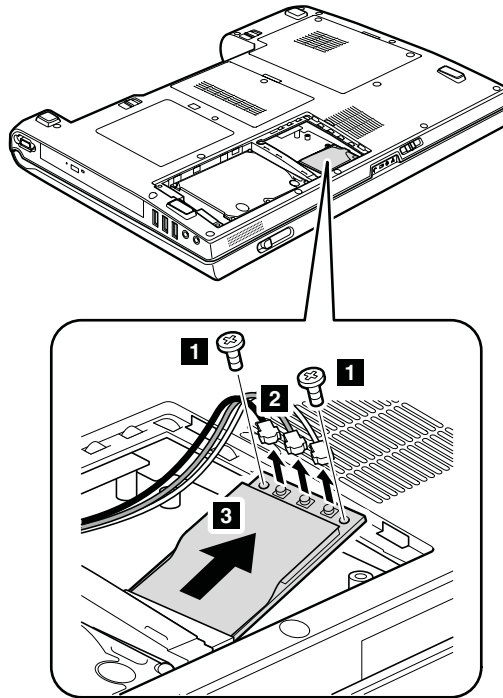
In step **2**, unplug the jacks by using the removal tool antenna RF connector (P/N: 08K7159) or pick the connectors with your fingers and gently unplug them in direction of the arrow.

When installing: Plug the white cable (MAIN) into the jack labeled  on the card, and the black cable (AUX) into the jack labeled  on the card.

(continued)

Removing and replacing a FRU

For MT 0769



| Step | Screw (quantity) | Color | Torque |
|----------|---|--------|-----------------------|
| 1 | M2.5 × 3 mm, pan-head, nylon-coated (2) | Silver | 0.392 Nm (4 kgfcm) |

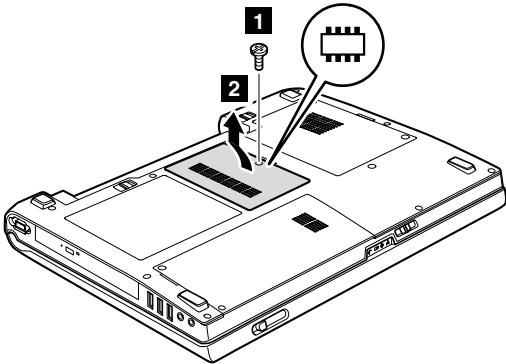
In step **2**, unplug the jacks by using the removal tool antenna RF connector (P/N: 08K7159) or pick the connectors with your fingers and gently unplug them in direction of the arrow.

When installing: Plug the black cable (MAIN) into the jack labeled **1** on the card, the white cable (AUX) into the jack labeled **2**, and the gray cable (MIMO) into the jack labeled **3** on the card.

1060 DIMM slot cover

For access, remove this FRU:

- “1010 Battery pack” on page 46



For MT 0689 and 0768

| Step | Screw (quantity) | Color | Torque |
|----------|--|--------|-----------------------|
| 1 | M2.5 × 4 mm, flat-head, nylon-coated (1) | Silver | 0.392 Nm (4 kgfcm) |

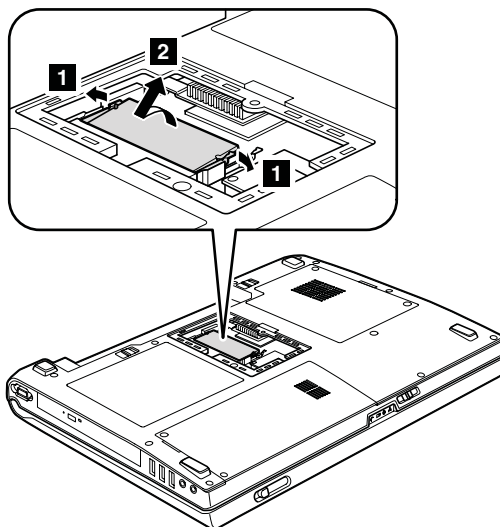
For MT 0769

| Step | Screw (quantity) | Color | Torque |
|----------|---|--------|-----------------------|
| 1 | M2.5 × 4 mm, pan-head, nylon-coated (1) | Silver | 0.392 Nm (4 kgfcm) |

1070 DIMM

For access, remove these FRUs in order:

- “1010 Battery pack” on page 46
- “1060 DIMM slot cover” on page 53



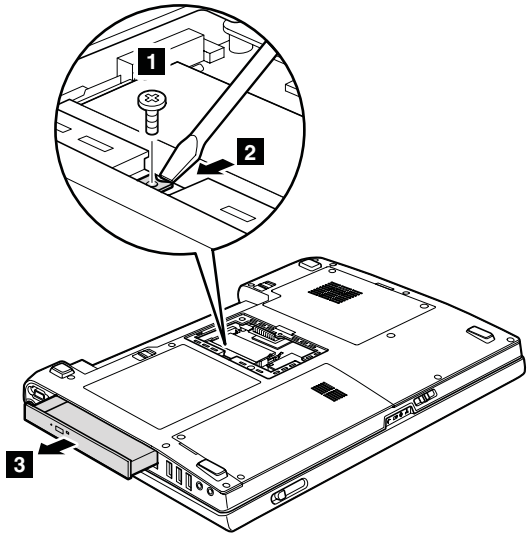
When installing: Insert the notched end of the DIMM into the socket. Press the DIMM firmly, and pivot it until it snaps into the place. Make sure that it is firmly fixed in the slot and does not move easily.

1080 Optical drive

For access, remove these FRUs in order:

- "1010 Battery pack" on page 46
- "1060 DIMM slot cover" on page 53 (only for MT 0689)

For MT 0689

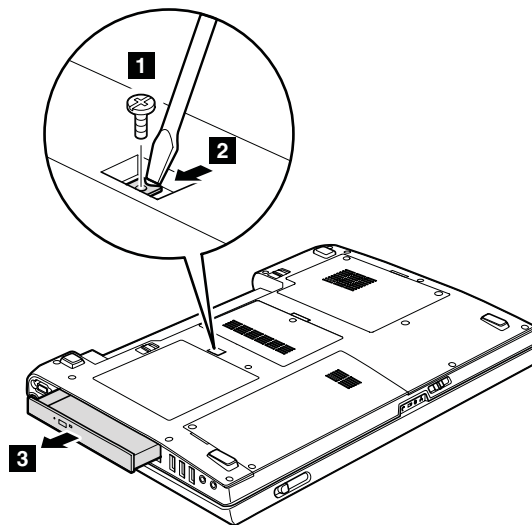


| Step | Screw (quantity) | Color | Torque |
|----------|--|--------|-----------------------|
| 1 | M2.5 × 4 mm, flat-head, nylon-coated (1) | Silver | 0.392 Nm (4 kgfcm) |

(continued)

Removing and replacing a FRU

For MT 0768 and 0769



For MT 0768

| Step | Screw (quantity) | Color | Torque |
|----------|--|--------|-----------------------|
| 1 | M2.5 × 4 mm, flat-head, nylon-coated (1) | Silver | 0.392 Nm (4 kgfcm) |

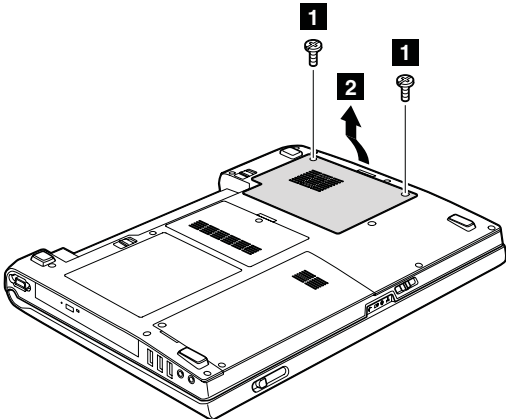
For MT 0769

| Step | Screw (quantity) | Color | Torque |
|----------|---|--------|-----------------------|
| 1 | M2.5 × 4 mm, pan-head, nylon-coated (1) | Silver | 0.392 Nm (4 kgfcm) |

1090 Thermal module slot cover

For access, remove this FRU:

- "1010 Battery pack" on page 46



For MT 0689 and 0768

| Step | Screw (quantity) | Color | Torque |
|----------|--|--------|-----------------------|
| 1 | M2.5 × 4 mm, flat-head, nylon-coated (2) | Silver | 0.392 Nm (4 kgfcm) |

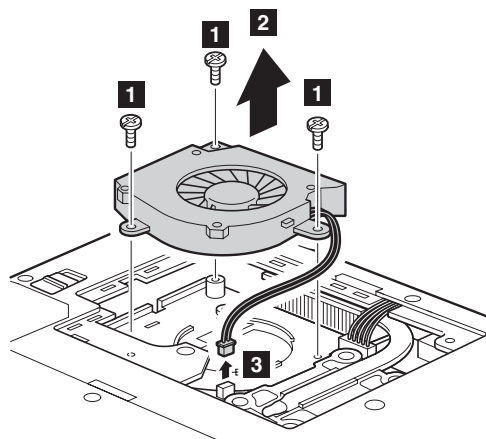
For MT 0769

| Step | Screw (quantity) | Color | Torque |
|----------|---|--------|-----------------------|
| 1 | M2.5 × 4 mm, pan-head, nylon-coated (2) | Silver | 0.392 Nm (4 kgfcm) |

1100 Fan

For access, remove this FRU:

- “1010 Battery pack” on page 46
- “1090 Thermal module slot cover” on page 57



For MT 0689

| Step | Screw (quantity) | Color | Torque |
|----------|--|-------|-----------------------|
| 1 | M2.5 × 5 mm, flat-head, nylon-coated (3) | Black | 0.392 Nm (4 kgfcm) |

For MT 0768

| Step | Screw (quantity) | Color | Torque |
|----------|--|--------|-----------------------|
| 1 | M2.5 × 6 mm, flat-head, nylon-coated (3) | Silver | 0.392 Nm (4 kgfcm) |

For MT 0769

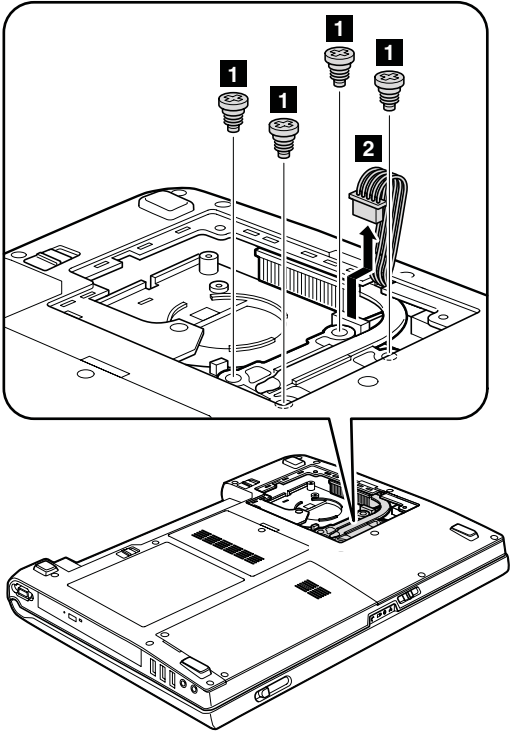
| Step | Screw (quantity) | Color | Torque |
|----------|---|--------|-----------------------|
| 1 | M2.5 × 6 mm, pan-head, nylon-coated (3) | Silver | 0.392 Nm (4 kgfcm) |

When installing: Make sure that the fan connector is attached firmly.

1110 Thermal module

- For access, remove these FRUs in order:
- "1010 Battery pack" on page 46
 - "1090 Thermal module slot cover" on page 57
 - "1100 Fan" on page 58

For MT 0689 and 0768



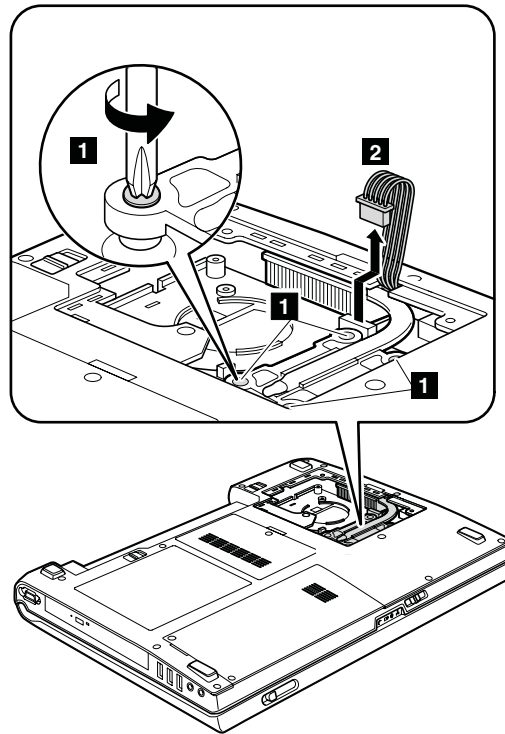
| Step | Screw (quantity) | Color | Torque |
|----------|-------------------------------------|--------|-----------------------|
| 1 | CPU thermal screw, nylon-coated (4) | Silver | 0.392 Nm (4 kgfcm) |

When installing: Make sure that the connector is attached firmly.

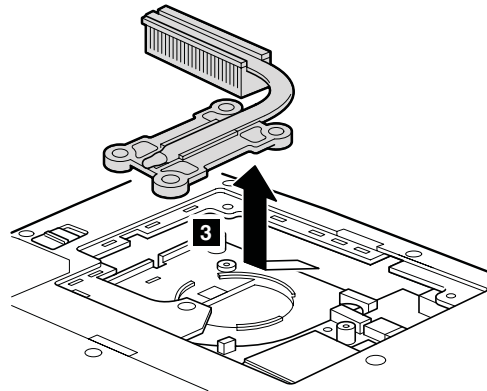
(continued)

Removing and replacing a FRU

For MT 0769

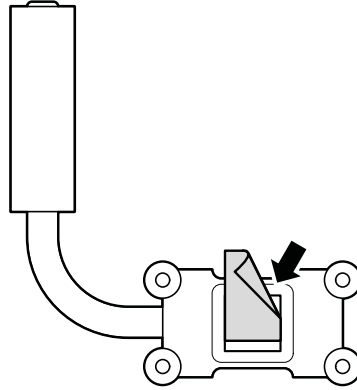


When installing: Make sure that the connector is attached firmly.



(continued)

When installing: Before you attach a new thermal module to the computer, peel off the covering film of thermal grease. Then attach the thermal module to the computer.



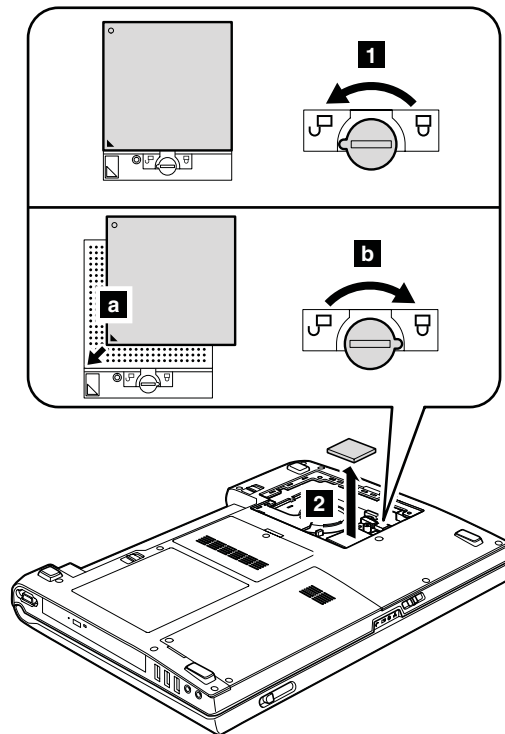
1120 CPU

For access, remove these FRUs in order:

- “1010 Battery pack” on page 46
- “1090 Thermal module slot cover” on page 57
- “1100 Fan” on page 58
- “1110 Thermal module” on page 59

Attention: CPU is extremely sensitive. When you service the CPU, avoid any kind of rough handling.

Rotate the head of the screw in the direction shown by arrow **1** to release the lock; then remove the CPU in the direction shown by arrow **2**.

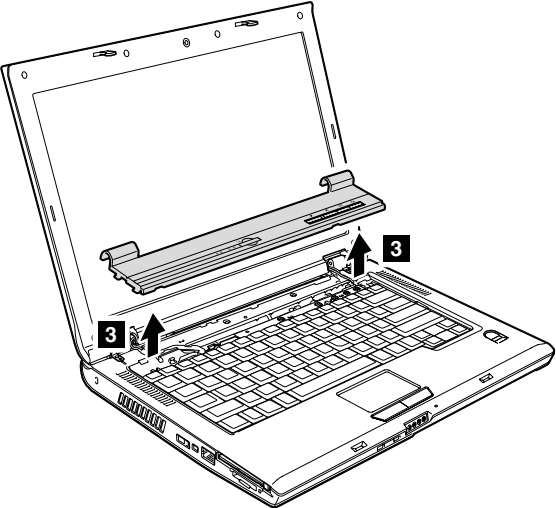
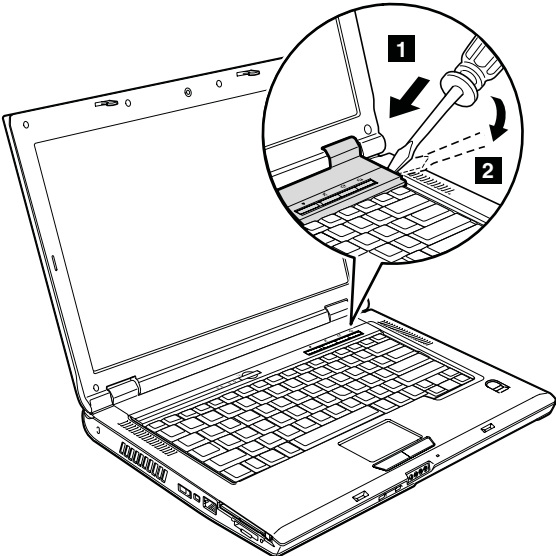


When installing: Place the CPU on the CPU socket **a**, and then rotate the head of the screw in the direction shown by arrow **b** to secure the CPU.

1130 Cover, strip (E cover)

For access, remove this FRU:

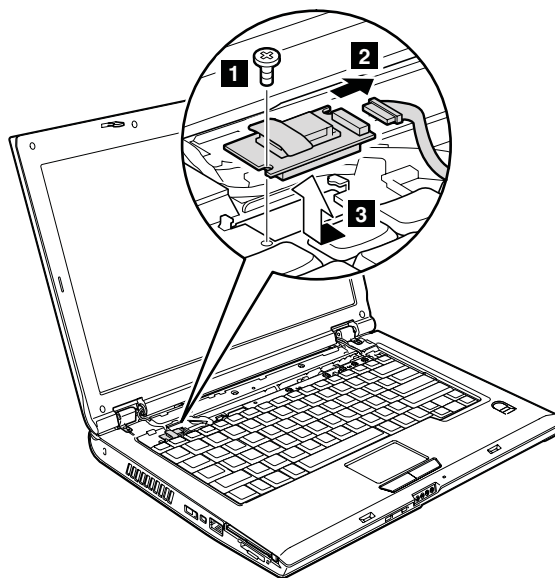
- "1010 Battery pack" on page 46



1140 *Bluetooth* daughter card (BDC) for MT 0769

For access, remove this FRU:

- “1010 Battery pack” on page 46
- “1130 Cover, strip (E cover)” on page 63



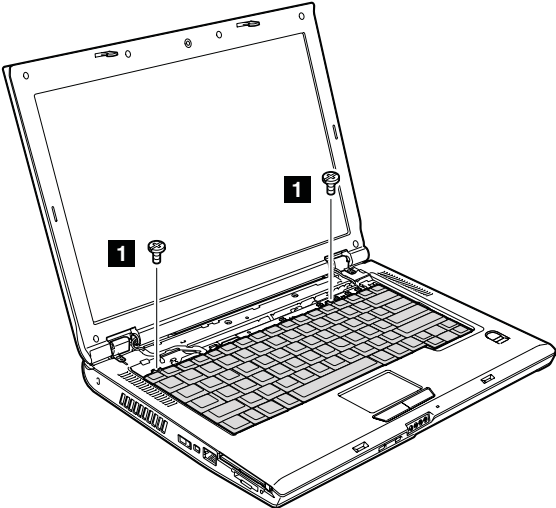
| Step | Screw (quantity) | Color | Torque |
|----------|---|--------|-----------------------|
| 1 | M2.5 × 3 mm, pan-head, nylon-coated (1) | Silver | 0.392 Nm (4 kgfcm) |

When installing: Make sure that the connector is attached firmly.

1150 Keyboard

For access, remove these FRUs in order:

- "1010 Battery pack" on page 46
- "1130 Cover, strip (E cover)" on page 63



For MT 0689 and 0768

| Step | Screw (quantity) | Color | Torque |
|----------|--|-------|-----------------------|
| 1 | M2.5 × 3 mm, flat-head, nylon-coated (2) | Black | 0.392 Nm (4 kgfcm) |

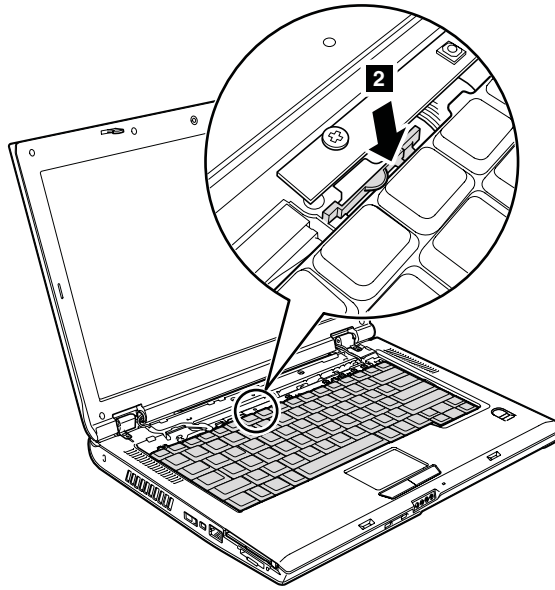
For MT 0769

| Step | Screw (quantity) | Color | Torque |
|----------|---|-------|-----------------------|
| 1 | M2.5 × 3 mm, pan-head, nylon-coated (2) | Black | 0.392 Nm (4 kgfcm) |

(continued)

Removing and replacing a FRU

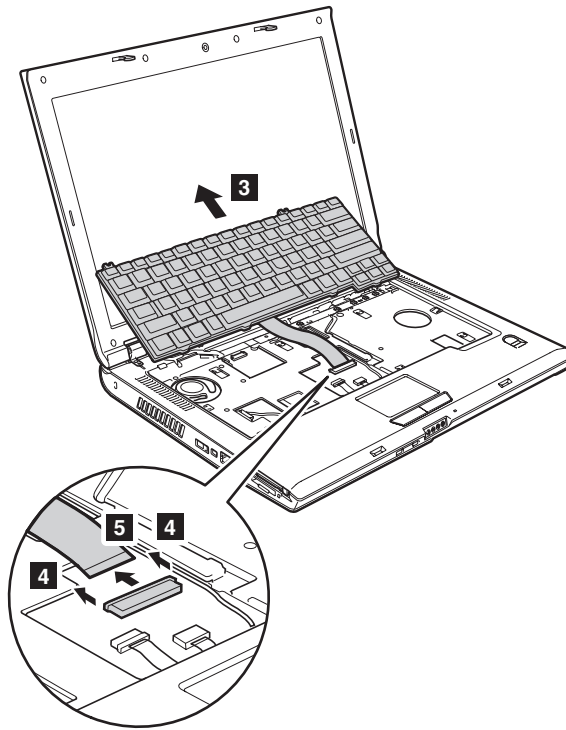
In step **2**, unlatch the keyboard.



When installing: Make sure that the latch is attached firmly. Then secure the screws.

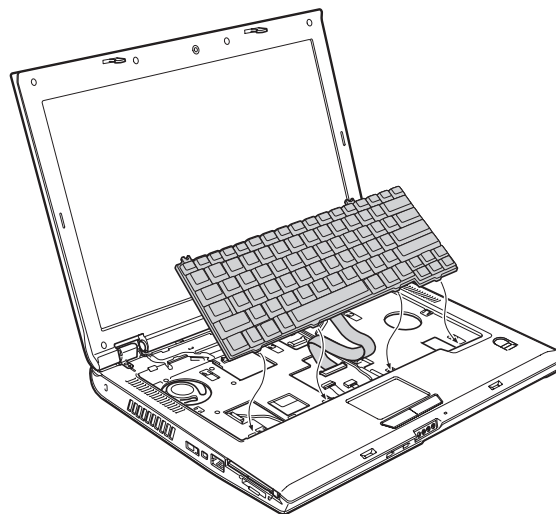
Lift the keyboard a little in the direction shown by arrow **4**. Then unlock the connector **5** and detach the connector.

(continued)



When installing:

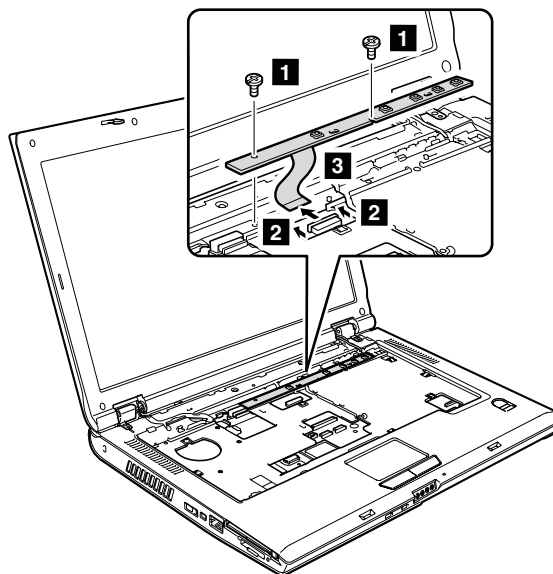
1. Make sure that the keyboard connector is attached firmly. Then lock the connector.
2. Make sure that the front side of the keyboard is under the frame.



1160 Function board

For access, remove these FRUs in order:

- "1010 Battery pack" on page 46
- "1130 Cover, strip (E cover)" on page 63
- "1150 Keyboard" on page 65



For MT 0689 and 0768

| Step | Screw (quantity) | Color | Torque |
|----------|--|-------|-----------------------|
| 1 | M2.5 × 3 mm, flat-head, nylon-coated (2) | Black | 0.392 Nm (4 kgfcm) |

For MT 0769

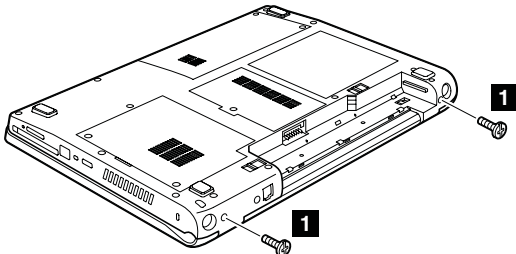
| Step | Screw (quantity) | Color | Torque |
|----------|---|-------|-----------------------|
| 1 | M2.5 × 3 mm, pan-head, nylon-coated (2) | Black | 0.392 Nm (4 kgfcm) |

1170 LCD unit

For access, remove these FRUs in order:

- "1010 Battery pack" on page 46
- "1020 Hard disk drive slot cover" on page 47
- "1040 PCI Express Mini Card for 802.11 a/b/g wireless LAN" on page 49
- "1050 PCI Express Mini Card for 802.11 a/b/g/n wireless LAN" on page 51
- "1060 DIMM slot cover" on page 53 (only for MT 0769)
- "1130 Cover, strip (E cover)" on page 63
- "1150 Keyboard" on page 65
- "1160 Function board" on page 68

For MT 0689



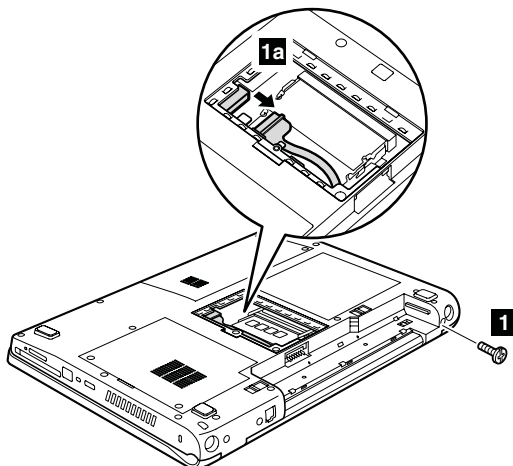
| Step | Screw (quantity) | Color | Torque |
|----------|--|--------|-----------------------|
| 1 | M2.5 × 8 mm, flat-head, nylon-coated (2) | Silver | 0.392 Nm (4 kgfcm) |

(continued)

Removing and replacing a FRU

For MT 0768 and 0769

Note: Step **1a** is only for MT 0769.



For MT 0768

| Step | Screw (quantity) | Color | Torque |
|----------|--|--------|-----------------------|
| 1 | M2.5 × 6 mm, flat-head, nylon-coated (1) | Silver | 0.392 Nm (4 kgfcm) |

For MT 0769

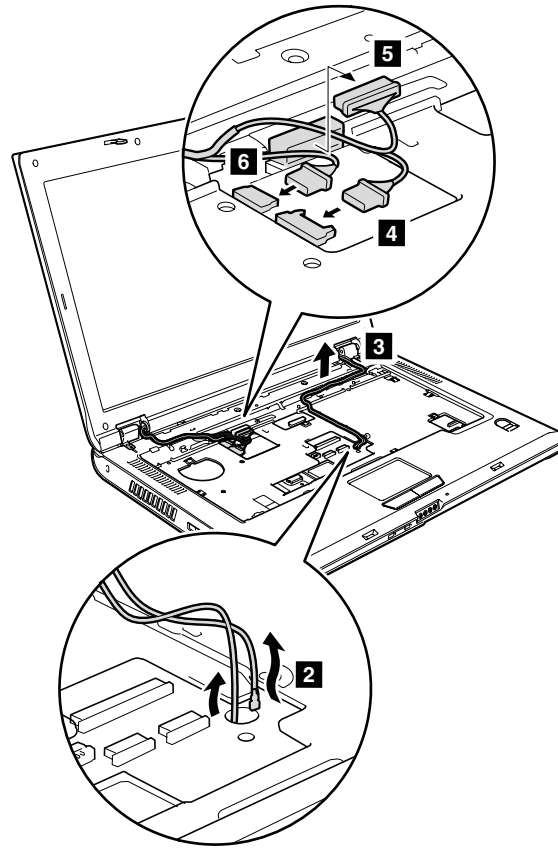
| Step | Screw (quantity) | Color | Torque |
|----------|---|--------|-----------------------|
| 1 | M2.5 × 6 mm, pan-head, nylon-coated (1) | Silver | 0.392 Nm (4 kgfcm) |

When installing: Make sure that the connector is attached firmly.

(continued)

Pull out the wireless LAN antenna cables from the guide hole of the system board **2**, and release them from the cable guides of the frame **3**.

For MT 0689 and 0768



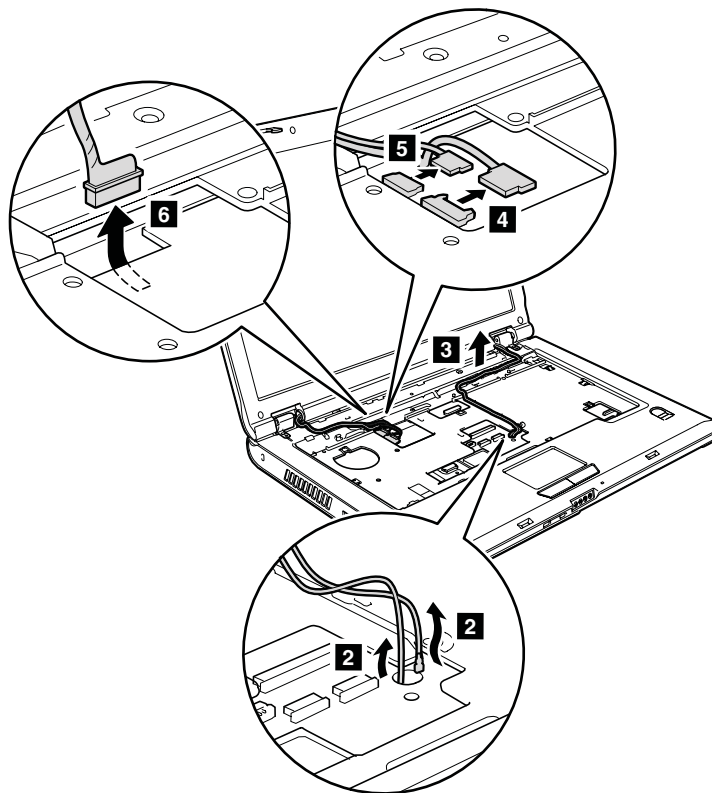
When installing: Make sure that the connectors **4**, **5**, and **6** are attached firmly.

(continued)

Removing and replacing a FRU

For MT 0769

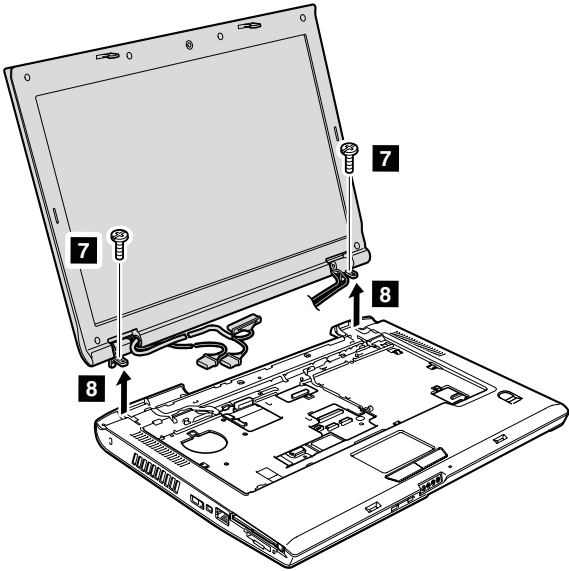
Pull out the wireless LAN antenna cables from the guide hole of the system board **2**, and release them from the cable guides of the frame **3**. Pull out the LCD cable from the hole of the system board **6**.



When installing: Make sure that the connectors **4** and **5** are attached firmly.

(continued)

For MT 0689



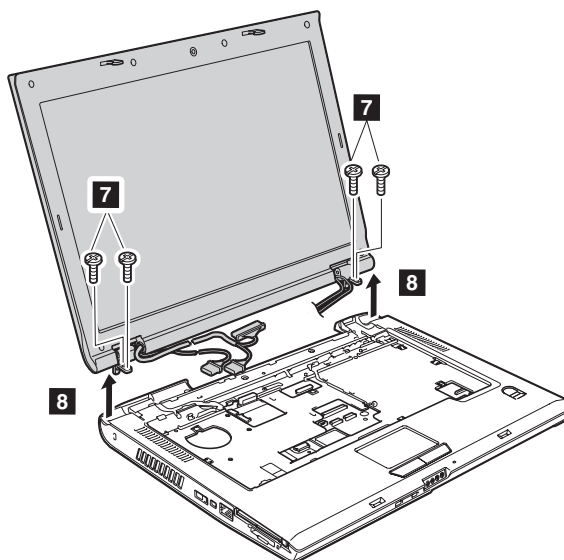
| Step | Screw (quantity) | Color | Torque |
|------|--|--------|-----------------------|
| 7 | M2.5 × 8 mm, flat-head, nylon-coated (2) | Silver | 0.392 Nm (4 kgfcm) |

When installing: Route the antenna cables along the cable guides. When you route the cables, do not tense them. To do so, the cables may get damaged by the cable guides of the frame, and may cause a broken wire. Make sure that you do not pinch the antenna cables when you attach the LCD assembly.

(continued)

Removing and replacing a FRU

For MT 0768 and 0769



For MT 0768

| Step | Screw (quantity) | Color | Torque |
|----------|--|--------|-----------------------|
| 7 | M2.5 × 6 mm, flat-head, nylon-coated (4) | Silver | 0.392 Nm (4 kgfcm) |

For MT 0769

| Step | Screw (quantity) | Color | Torque |
|----------|---|--------|-----------------------|
| 7 | M2.5 × 6 mm, pan-head, nylon-coated (4) | Silver | 0.392 Nm (4 kgfcm) |

When installing: Route the antenna cables along the cable guides. When you route the cables, do not tense them. To do so, the cables may get damaged by the cable guides of the frame, and may cause a broken wire. Make sure that you do not pinch the antenna cables when you attach the LCD assembly.

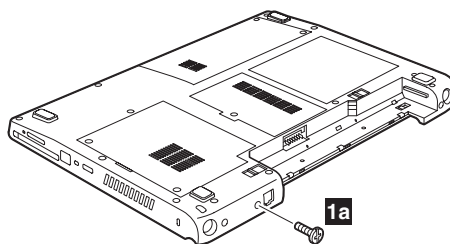
1180 Top cover assembly (C cover) with speakers and Bluetooth daughter card (BDC) for MT 0689 and 0768

For access, remove these FRUs in order:

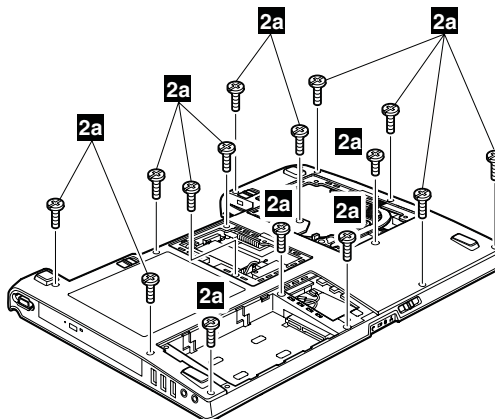
- “1010 Battery pack” on page 46
- “1020 Hard disk drive slot cover” on page 47
- “1040 PCI Express Mini Card for 802.11 a/b/g wireless LAN” on page 49
- “1050 PCI Express Mini Card for 802.11 a/b/g/n wireless LAN” on page 51
- “1090 Thermal module slot cover” on page 57
- “1100 Fan” on page 58
- “1130 Cover, strip (E cover)” on page 63
- “1150 Keyboard” on page 65
- “1160 Function board” on page 68
- “1170 LCD unit” on page 69

For MT 0689

Note: Steps **1a** and **2a** are only for MT 0689.



| Step | Screw (quantity) | Color | Torque |
|-----------|--|-------|-----------------------|
| 1a | M2.5 × 6 mm, flat-head, nylon-coated (1) | Black | 0.392 Nm (4 kgfcm) |

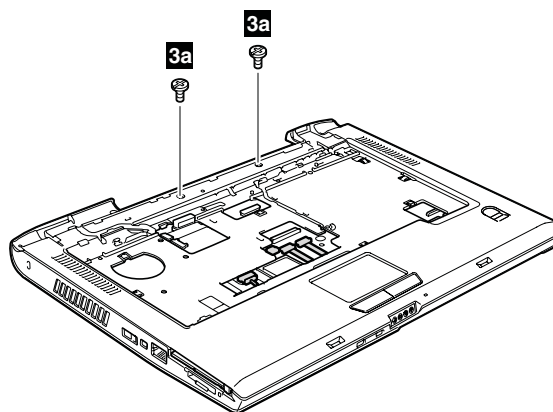


| Step | Screw (quantity) | Color | Torque |
|-----------|---|-------|-----------------------|
| 2a | M2.5 × 6 mm, flat-head, nylon-coated (15) | Black | 0.392 Nm (4 kgfcm) |

(continued)

Removing and replacing a FRU

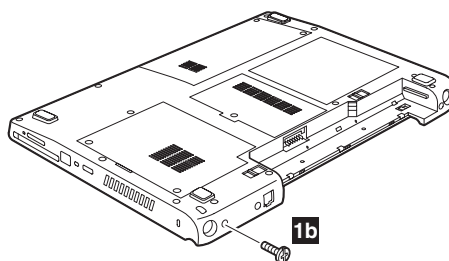
Note: Step **3a** is only for MT 0689.



| Step | Screw (quantity) | Color | Torque |
|-----------|--|-------|-----------------------|
| 3a | M2.5 × 6 mm, flat-head, nylon-coated (2) | Black | 0.392 Nm (4 kgfcm) |

For MT 0768

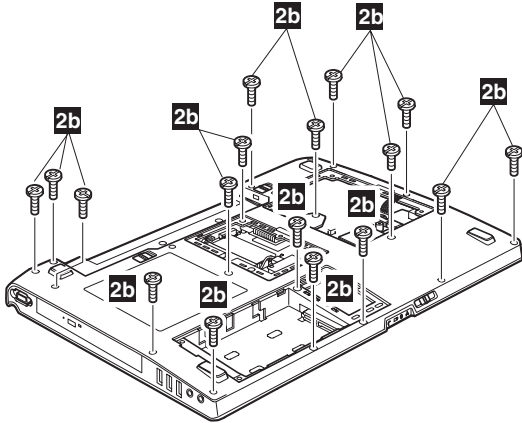
Note: Step **1b** is only for MT 0768



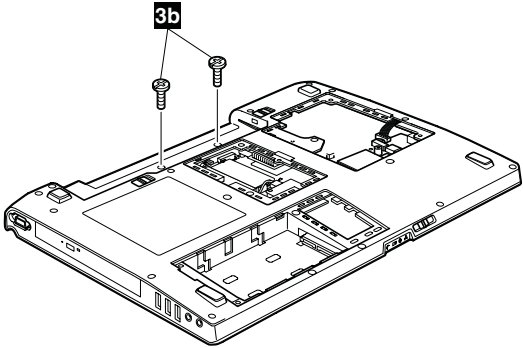
| Step | Screw (quantity) | Color | Torque |
|-----------|--|-------|-----------------------|
| 1b | M2.5 × 6 mm, flat-head, nylon-coated (1) | Black | 0.392 Nm (4 kgfcm) |

(continued)

Note: Steps **2b** and **3b** are only for MT 0768.



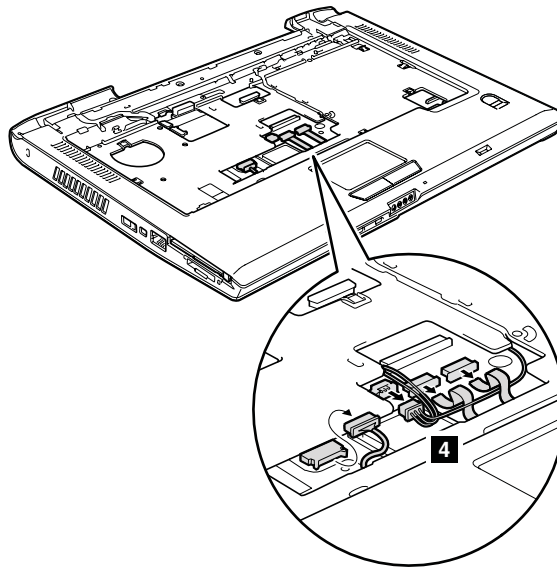
| Step | Screw (quantity) | Color | Torque |
|-----------|---|-------|-----------------------|
| 2b | M2.5 × 6 mm, flat-head, nylon-coated (17) | Black | 0.392 Nm (4 kgfcm) |



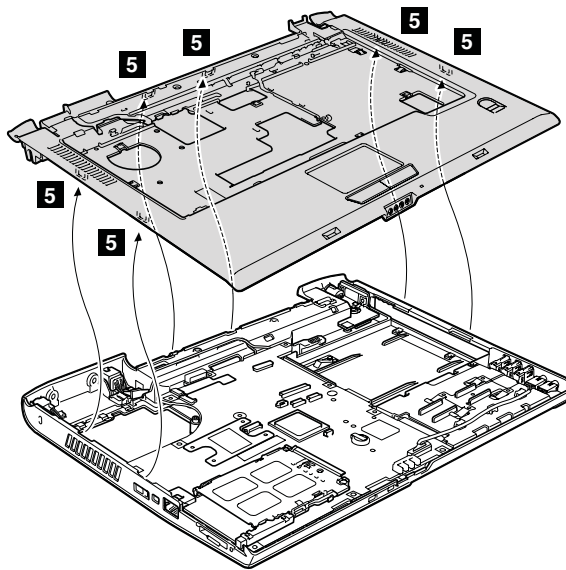
| Step | Screw (quantity) | Color | Torque |
|-----------|--|-------|-----------------------|
| 3b | M2.5 × 6 mm, flat-head, nylon-coated (2) | Black | 0.392 Nm (4 kgfcm) |

(continued)

Removing and replacing a FRU



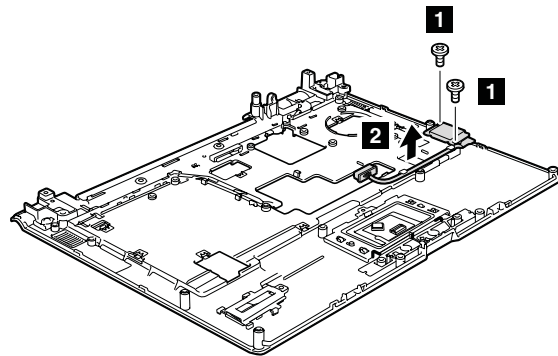
When installing: Make sure that the connectors are attached firmly.



(continued)

The *Bluetooth* daughter card is attached underside of the top cover assembly.

To remove the *Bluetooth* daughter card, do as follows:



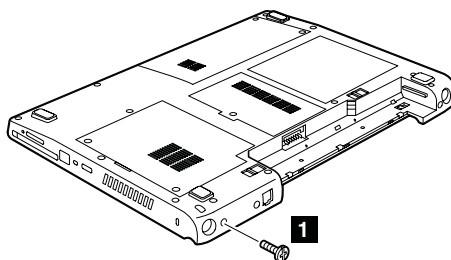
| Step | Screw (quantity) | Color | Torque |
|----------|--|-------|-------------------------|
| 1 | M2 × 4 mm, flat-head, nylon-coated (2) | Black | 0.245 Nm (2.5 kgfcm) |

When installing: Make sure that the connector is attached firmly.

1190 Top cover assembly (C cover) for MT 0769

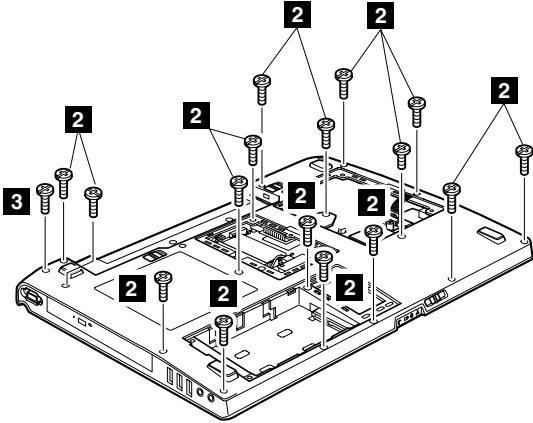
For access, remove these FRUs in order:

- “1010 Battery pack” on page 46
- “1020 Hard disk drive slot cover” on page 47
- “1040 PCI Express Mini Card for 802.11 a/b/g wireless LAN” on page 49
- “1050 PCI Express Mini Card for 802.11 a/b/g/n wireless LAN” on page 51
- “1090 Thermal module slot cover” on page 57
- “1100 Fan” on page 58
- “1130 Cover, strip (E cover)” on page 63
- “1150 Keyboard” on page 65
- “1160 Function board” on page 68
- “1170 LCD unit” on page 69

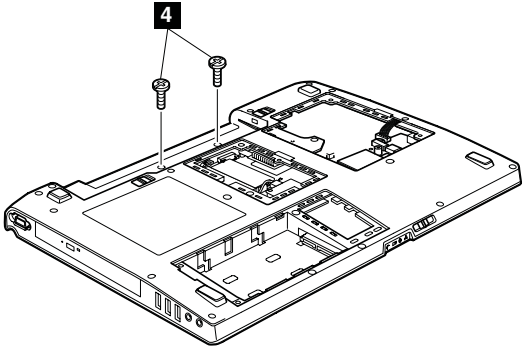


| Step | Screw (quantity) | Color | Torque |
|----------|---|--------|-----------------------|
| 1 | M2.5 × 6 mm, pan-head, nylon-coated (1) | Silver | 0.392 Nm (4 kgfcm) |

(continued)



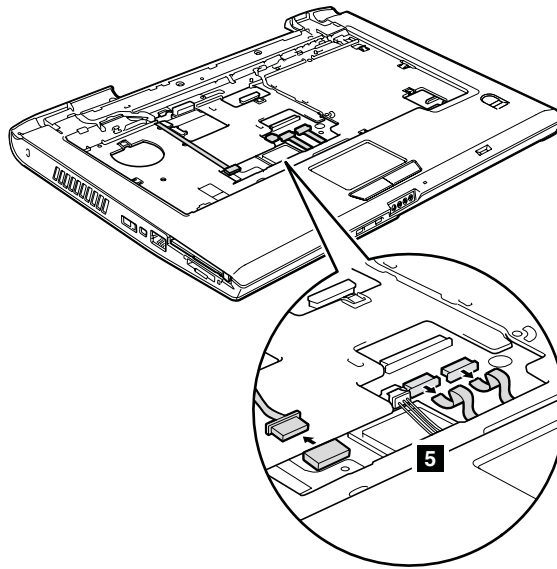
| Step | Screw (quantity) | Color | Torque |
|----------|--|--------|-----------------------|
| 2 | M2.5 × 8 mm, pan-head, nylon-coated (16) | Silver | 0.392 Nm (4 kgfcm) |
| 3 | M2.5 × 10 mm, pan-head, nylon-coated (1) | Silver | 0.392 Nm (4 kgfcm) |



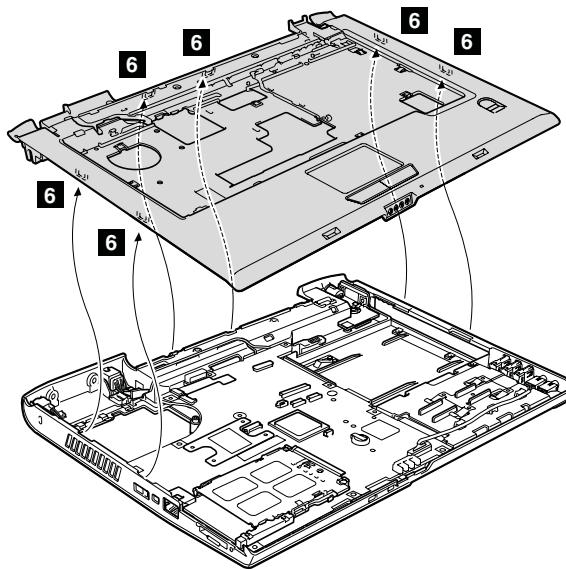
| Step | Screw (quantity) | Color | Torque |
|----------|---|-------|-----------------------|
| 4 | M2.5 × 3 mm, pan-head, nylon-coated (2) | Black | 0.392 Nm (4 kgfcm) |

(continued)

Removing and replacing a FRU



When installing: Make sure that the connectors are attached firmly.

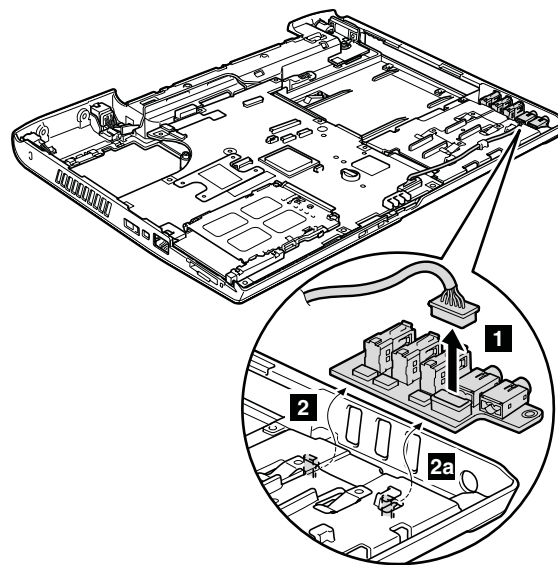


1200 USB/Audio connector card

For access, remove these FRUs in order:

- "1010 Battery pack" on page 46
- "1020 Hard disk drive slot cover" on page 47
- "1040 PCI Express Mini Card for 802.11 a/b/g wireless LAN" on page 49
- "1050 PCI Express Mini Card for 802.11 a/b/g/n wireless LAN" on page 51
- "1130 Cover, strip (E cover)" on page 63
- "1150 Keyboard" on page 65
- "1160 Function board" on page 68
- "1170 LCD unit" on page 69
- "1180 Top cover assembly (C cover) with speakers and *Bluetooth* daughter card (BDC) for MT 0689 and 0768" on page 75
- "1190 Top cover assembly (C cover) for MT 0769" on page 80

Note: The latch **2a** is only for MT 0689 and 0768.



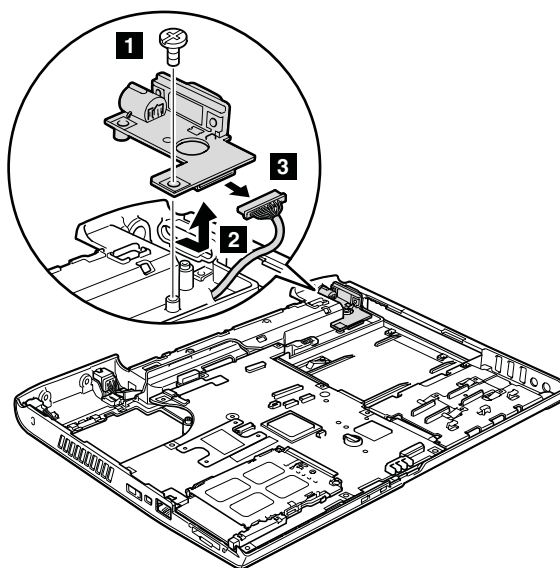
When installing: Make sure that the connector is attached firmly.

1210 VGA connector card

For access, remove these FRUs in order:

- "1010 Battery pack" on page 46
- "1020 Hard disk drive slot cover" on page 47
- "1040 PCI Express Mini Card for 802.11 a/b/g wireless LAN" on page 49
- "1050 PCI Express Mini Card for 802.11 a/b/g/n wireless LAN" on page 51
- "1130 Cover, strip (E cover)" on page 63
- "1150 Keyboard" on page 65
- "1160 Function board" on page 68
- "1170 LCD unit" on page 69
- "1180 Top cover assembly (C cover) with speakers and *Bluetooth* daughter card (BDC) for MT 0689 and 0768" on page 75
- "1190 Top cover assembly (C cover) for MT 0769" on page 80

For MT 0689 and 0768

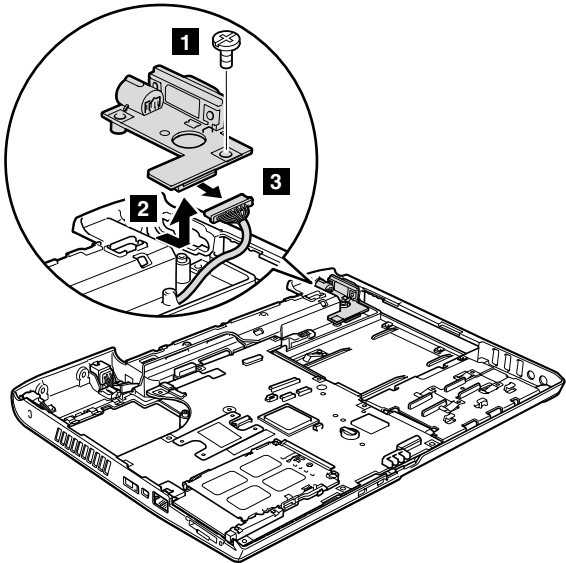


| Step | Screw (quantity) | Color | Torque |
|----------|--|-------|-------------------------|
| 1 | M2 × 3 mm, flat-head, nylon-coated (1) | Black | 0.245 Nm (2.5 kgfcm) |

When installing: Make sure that the connector is attached firmly.

(continued)

For MT 0769



| Step | Screw (quantity) | Color | Torque |
|----------|---|--------|-----------------------|
| 1 | M2.5 × 4 mm, pan-head, nylon-coated (1) | Silver | 0.392 Nm (4 kgfcm) |

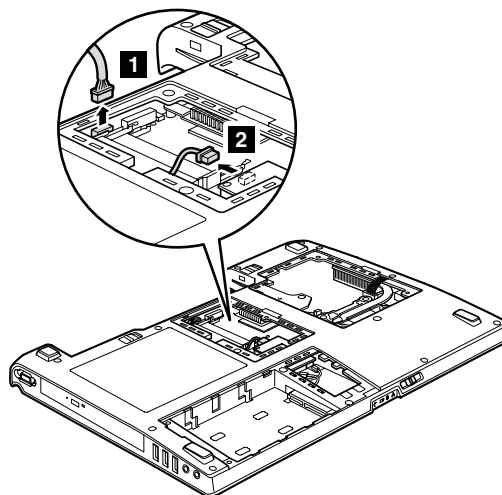
When installing: Make sure that the connector is attached firmly.

1220 System board, MDC, PC Card slot, and bottom cover assembly (D cover) for MT 0689 and 0768

For access, remove these FRUs, in order:

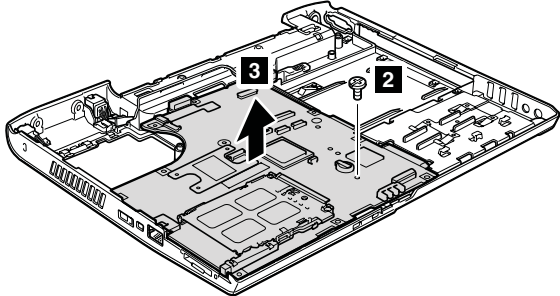
- “1010 Battery pack” on page 46
- “1020 Hard disk drive slot cover” on page 47
- “1030 Hard disk drive” on page 48
- “1040 PCI Express Mini Card for 802.11 a/b/g wireless LAN” on page 49
- “1050 PCI Express Mini Card for 802.11 a/b/g/n wireless LAN” on page 51
- “1060 DIMM slot cover” on page 53
- “1070 DIMM” on page 54
- “1080 Optical drive” on page 55
- “1090 Thermal module slot cover” on page 57
- “1100 Fan” on page 58
- “1110 Thermal module” on page 59
- “1120 CPU” on page 62
- “1130 Cover, strip (E cover)” on page 63
- “1150 Keyboard” on page 65
- “1160 Function board” on page 68
- “1170 LCD unit” on page 69
- “1180 Top cover assembly (C cover) with speakers and *Bluetooth* daughter card (BDC) for MT 0689 and 0768” on page 75
- “1190 Top cover assembly (C cover) for MT 0769” on page 80

Note: MDC and PC Card slot are attached to the system board.



When installing: Make sure that the connectors are attached firmly.

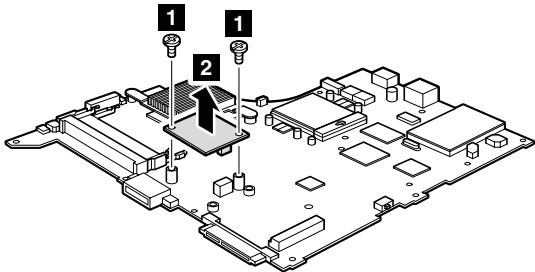
(continued)



| Step | Screw (quantity) | Color | Torque |
|----------|--|-------|-----------------------|
| 2 | M2.5 × 3 mm, flat-head, nylon-coated (1) | Black | 0.392 Nm (4 kgfcm) |

In step **3**, remove the system board, the MDC, and the PC Card slot together from the bottom cover.

To remove the MDC, do as follows:

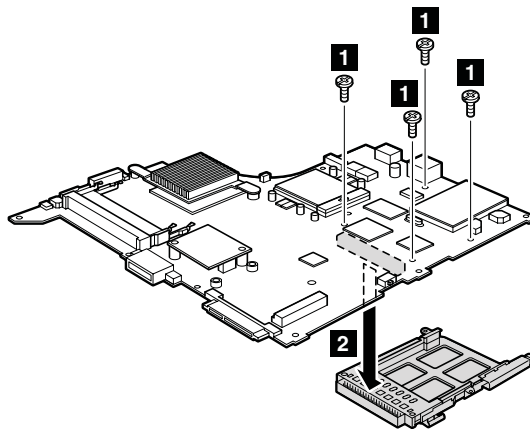


| Step | Screw (quantity) | Color | Torque |
|----------|--|--------|-----------------------|
| 1 | M2.5 × 3 mm, flat-head, nylon-coated (2) | Silver | 0.392 Nm (4 kgfcm) |

(continued)

Removing and replacing a FRU

To remove the PC Card slot assembly, do as follows:



| Step | Screw (quantity) | Color | Torque |
|----------|--|--------|-------------------------|
| 1 | M2 × 4 mm, flat-head, nylon-coated (4) | Silver | 0.245 Nm (2.5 kgfcm) |

When installing: Make sure that the connectors of PC Card slot assembly is attached to the system board firmly, and then fasten the screws.

(continued)

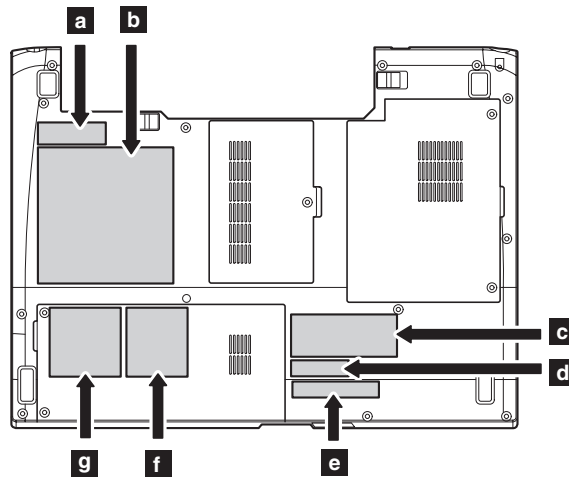
Note: Applying labels to the bottom cover

When you replace the base cover, you need to stick some labels on the new base cover. Some of the labels have been shipped with the new base cover, and some may need to be reused from the old base cover.

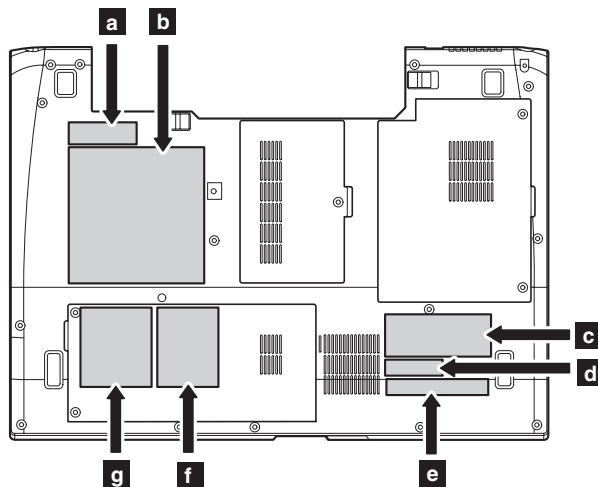
Following labels are the typical labels stuck on the bottom side of the computer when it is shipped.

- a** MAC label (802.11 a/b/g)
- b** Product label
- c** Windows license label (COA)
- d** MAC label (802.3)
- e** Serial number label
- f** Bluetooth label
- g** Homologation label

For MT 0698



For MT 0768



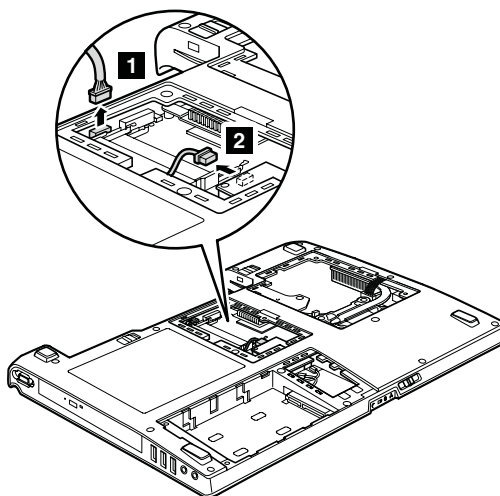
For some models, you also need to apply one or two FCC labels or the other types of labels. Check the old base cover; if it has one or two FCC labels or the other types of labels, find duplicates of them in the package and apply them to the new base cover.

1230 System board, MDC, ExpressCard slot, heat sink assembly, and bottom cover assembly (D cover) for MT 0769

For access, remove these FRUs, in order:

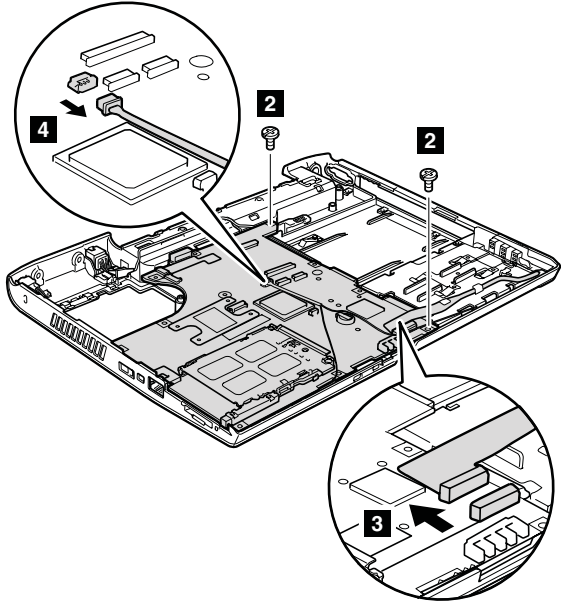
- “1010 Battery pack” on page 46
- “1020 Hard disk drive slot cover” on page 47
- “1030 Hard disk drive” on page 48
- “1040 PCI Express Mini Card for 802.11 a/b/g wireless LAN” on page 49
- “1050 PCI Express Mini Card for 802.11 a/b/g/n wireless LAN” on page 51
- “1060 DIMM slot cover” on page 53
- “1070 DIMM” on page 54
- “1080 Optical drive” on page 55
- “1090 Thermal module slot cover” on page 57
- “1100 Fan” on page 58
- “1110 Thermal module” on page 59
- “1120 CPU” on page 62
- “1130 Cover, strip (E cover)” on page 63
- “1150 Keyboard” on page 65
- “1160 Function board” on page 68
- “1170 LCD unit” on page 69
- “1180 Top cover assembly (C cover) with speakers and *Bluetooth* daughter card (BDC) for MT 0689 and 0768” on page 75
- “1190 Top cover assembly (C cover) for MT 0769” on page 80

Note: MDC, ExpressCard slot, and heat sink assembly are attached to the system board.



When installing: Make sure that the connectors are attached firmly.

(continued)

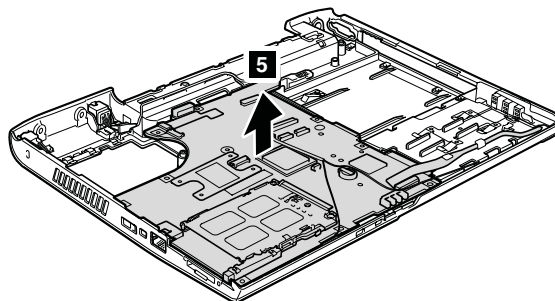


| Step | Screw (quantity) | Color | Torque |
|------|---|--------|-----------------------|
| 2 | M2.5 × 4 mm, pan-head, nylon-coated (2) | Silver | 0.392 Nm (4 kgfcm) |

When installing: Make sure that the connectors are attached firmly.

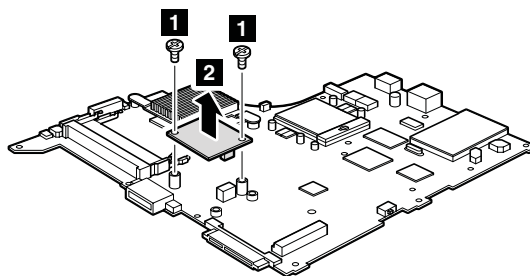
(continued)

Removing and replacing a FRU



In step **5**, remove the system board, the MDC, the ExpressCard slot and the heat sink assembly together from the bottom cover.

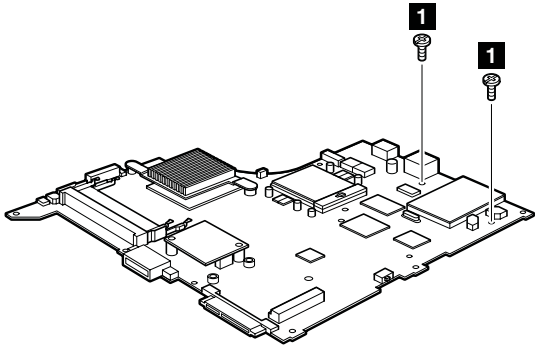
To remove the MDC, do as follows:



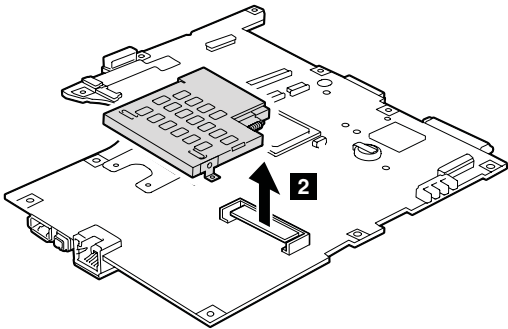
| Step | Screw (quantity) | Color | Torque |
|----------|---|--------|-----------------------|
| 1 | M2.5 × 3 mm, pan-head, nylon-coated (2) | Silver | 0.392 Nm (4 kgfcm) |

(continued)

To remove the ExpressCard slot, do as follows:



| Step | Screw (quantity) | Color | Torque |
|------|---------------------------------------|-------|-------------------------|
| 1 | M2 × 4 mm, pan-head, nylon-coated (2) | Black | 0.245 Nm (2.5 kgfcm) |



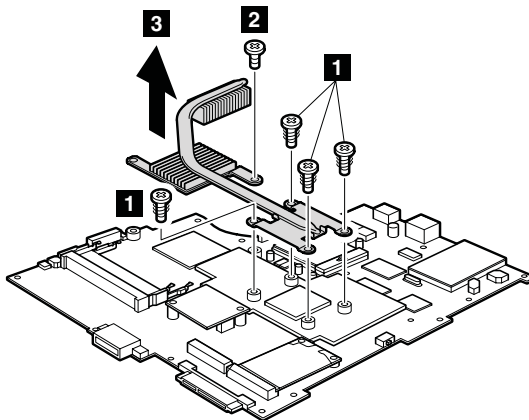
When installing: Make sure that the connectors of ExpressCard slot is attached to the system board firmly, and then fasten the screws.

(continued)

Removing and replacing a FRU

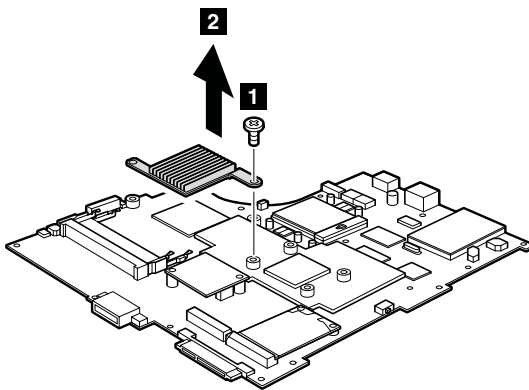
To remove the heat sink assembly, do as follows:

For discrete models



| Step | Screw (quantity) | Color | Torque |
|----------|---|--------|-----------------------|
| 1 | Thermal screw, nylon-coated (4) | Silver | 0.392 Nm (4 kgfcm) |
| 2 | M2.5 × 3 mm, pan-head, nylon-coated (1) | Silver | 0.392 Nm (4 kgfcm) |

For integrated models



| Step | Screw (quantity) | Color | Torque |
|----------|---|--------|-----------------------|
| 1 | M2.5 × 3 mm, pan-head, nylon-coated (1) | Silver | 0.392 Nm (4 kgfcm) |

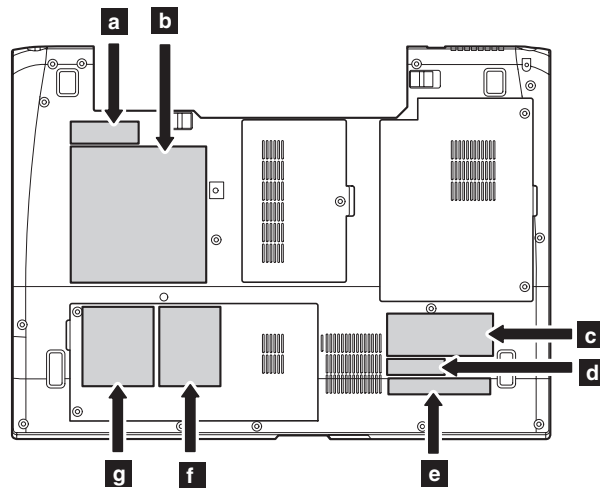
(continued)

Note: Applying labels to the bottom cover

When you replace the base cover, you need to stick some labels on the new base cover. Some of the labels have been shipped with the new base cover, and some may need to be reused from the old base cover.

Following labels are the typical labels stuck on the bottom side of the computer when it is shipped.

- a** MAC label (802.11 a/b/g)
- b** Product label
- c** Windows license label (COA)
- d** MAC label (802.3)
- e** Serial number label
- f** Bluetooth label
- g** Homologation label



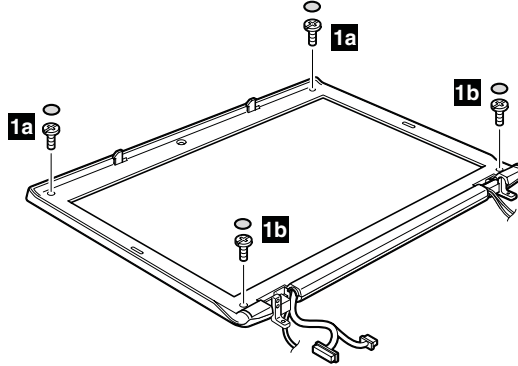
For some models, you also need to apply one or two FCC labels or the other types of labels. Check the old base cover; if it has one or two FCC labels or the other types of labels, find duplicates of them in the package and apply them to the new base cover.

2010 LCD front bezel (B cover)

For access, remove this FRU:

- "1010 Battery pack" on page 46

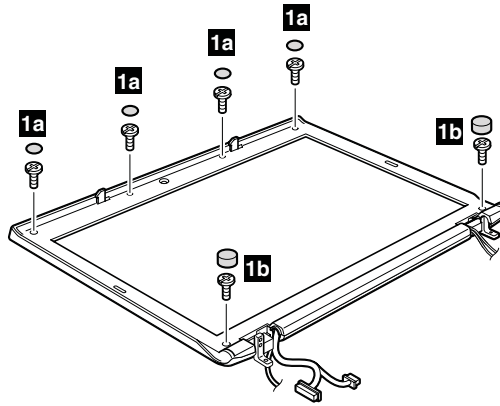
For MT 0698 and 0768



Note: Screws **1a** are only for MT0768.

| Step | Screw cap | Screw (quantity) | Color | Torque |
|-----------|-----------|--|-------|--------------------|
| 1a | ○ | M2.5 × 5 mm, flat-head, nylon-coated (2) | Black | 0.392 Nm (4 kgfcm) |
| 1b | ○ | M2.5 × 5 mm, flat-head, nylon-coated (2) | Black | 0.392 Nm (4 kgfcm) |

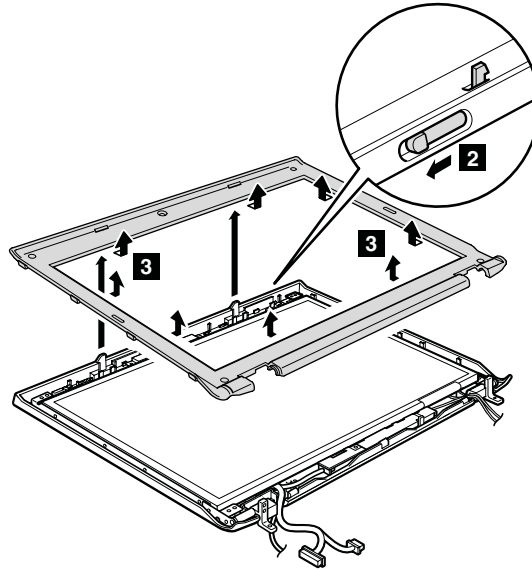
For MT 0769



| Step | Screw cap | Screw (quantity) | Color | Torque |
|-----------|--------------|---|--------|--------------------|
| 1a | ○ (thin) | M2.5 × 6 mm, pan-head, nylon-coated (4) | Silver | 0.392 Nm (4 kgfcm) |
| 1b | ○ (thick) | M2.5 × 6 mm, pan-head, nylon-coated (2) | Silver | 0.392 Nm (4 kgfcm) |

(continued)

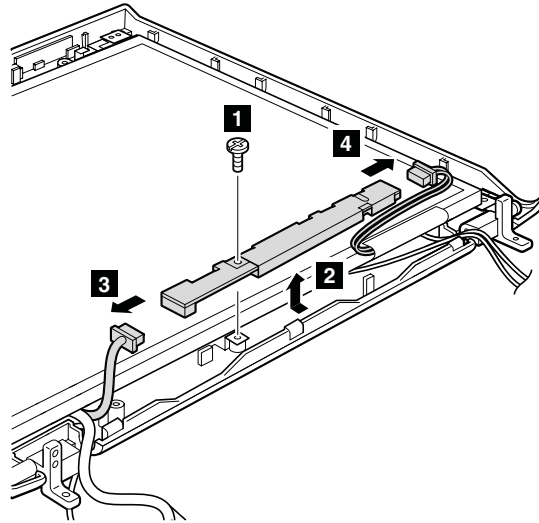
In step **2**, while sliding the LCD latch lever in the direction shown by the arrow, remove the bezel in the direction shown by arrow **3**.



2020 Inverter card

For access, remove these FRUs in order:

- "1010 Battery pack" on page 46
- "2010 LCD front bezel (B cover)" on page 96



For MT 0698 and 0768

| Step | Screw (quantity) | Color | Torque |
|----------|--|-------|-----------------------|
| 1 | M2.5 × 5 mm, flat-head, nylon-coated (1) | Black | 0.392 Nm (4 kgfcm) |

For MT 0769

| Step | Screw (quantity) | Color | Torque |
|----------|---------------------------------------|--------|-------------------------|
| 1 | M2 × 3 mm, pan-head, nylon-coated (1) | Silver | 0.245 Nm (2.5 kgfcm) |

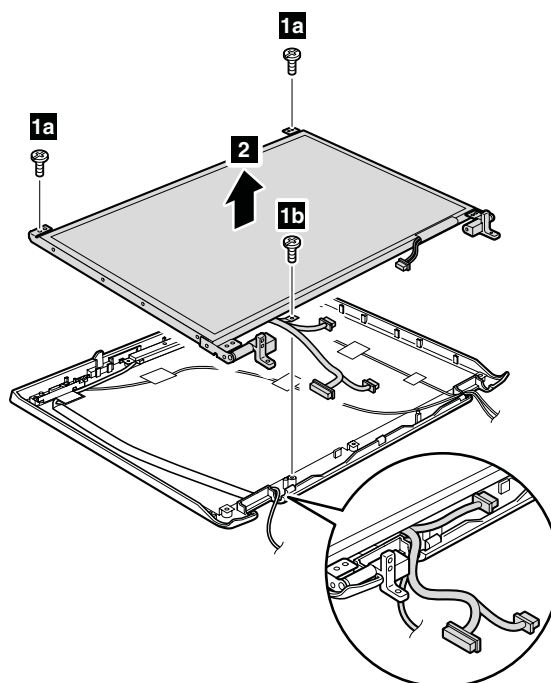
When installing: Make sure that connectors **3** and **4** are attached firmly.

2030 LCD panel, LCD cable, and hinges

For access, remove these FRUs in order:

- "1010 Battery pack" on page 46
- "1020 Hard disk drive slot cover" on page 47
- "1040 PCI Express Mini Card for 802.11 a/b/g wireless LAN" on page 49
- "1050 PCI Express Mini Card for 802.11 a/b/g/n wireless LAN" on page 51
- "1130 Cover, strip (E cover)" on page 63
- "1150 Keyboard" on page 65
- "1160 Function board" on page 68
- "1170 LCD unit" on page 69
- "2010 LCD front bezel (B cover)" on page 96
- "2020 Inverter card" on page 98

For MT 0698 and 0768



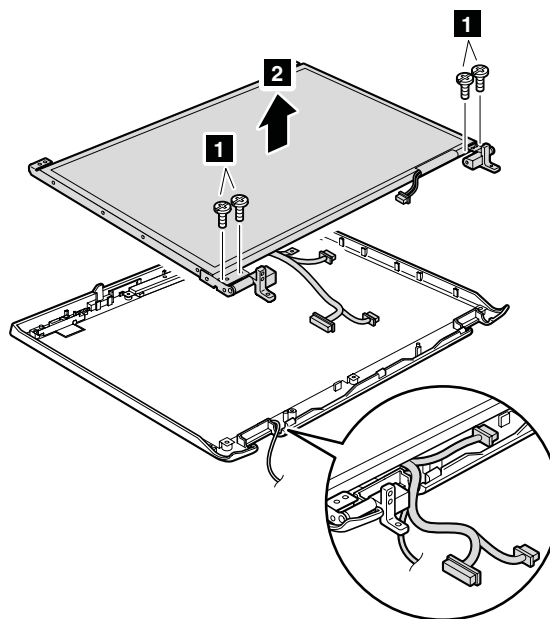
Note: Screws **1a** are only for MT 0689.

| Step | Screw (quantity) | Color | Torque |
|-----------|--|-------|-----------------------|
| 1a | M2.5 × 5 mm, flat-head, nylon-coated (2) | Black | 0.392 Nm (4 kgfcm) |
| 1b | M2.5 × 5 mm, flat-head, nylon-coated (1) | Black | 0.392 Nm (4 kgfcm) |

(continued)

Removing and replacing a FRU

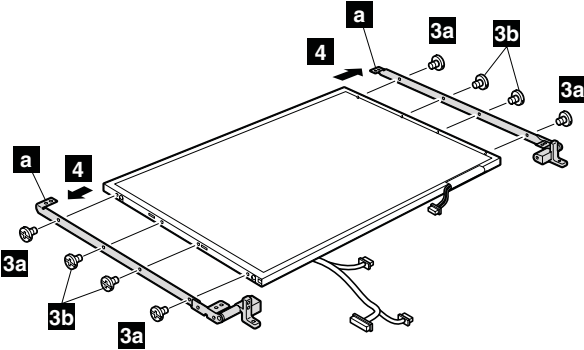
For MT 0769



| Step | Screw (quantity) | Color | Torque |
|----------|---|-------|-----------------------|
| 1 | M2.5 × 5 mm, pan-head, nylon-coated (2) | Black | 0.392 Nm (4 kgfcm) |

(continued)

Remove the hinges (**a**) from the LCD panel.



Note: Screws **3b** are only for MT 0768 and 0769.

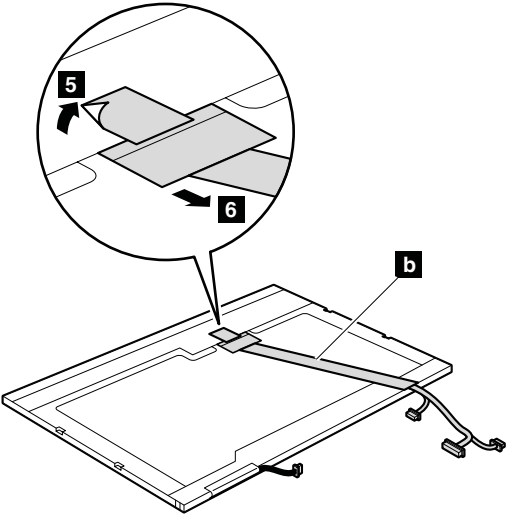
For MT 0689 and 0768

| Step | Screw (quantity) | Color | Torque |
|-----------|--|--------|-------------------------|
| 3a | M2 × 3 mm, flat-head, nylon-coated (4) | Silver | 0.245 Nm (2.5 kgfcm) |
| 3b | M2 × 3 mm, flat-head, nylon-coated (4) | Silver | 0.245 Nm (2.5 kgfcm) |

For MT 0769

| Step | Screw (quantity) | Color | Torque |
|-----------|---------------------------------------|--------|-------------------------|
| 3a | M2 × 3 mm, pan-head, nylon-coated (4) | Silver | 0.245 Nm (2.5 kgfcm) |
| 3b | M2 × 3 mm, pan-head, nylon-coated (4) | Silver | 0.245 Nm (2.5 kgfcm) |

Remove the LCD cable assembly (**b**) from the LCD panel.

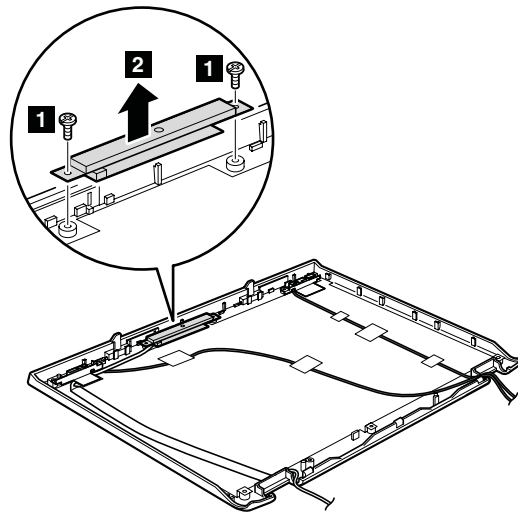


2040 Camera and LCD rear cover assembly (A cover)

For access, remove these FRUs in order:

- "1010 Battery pack" on page 46
- "1020 Hard disk drive slot cover" on page 47
- "1040 PCI Express Mini Card for 802.11 a/b/g wireless LAN" on page 49
- "1050 PCI Express Mini Card for 802.11 a/b/g/n wireless LAN" on page 51
- "1130 Cover, strip (E cover)" on page 63
- "1150 Keyboard" on page 65
- "1160 Function board" on page 68
- "1170 LCD unit" on page 69
- "2010 LCD front bezel (B cover)" on page 96
- "2020 Inverter card" on page 98
- "2030 LCD panel, LCD cable, and hinges" on page 99

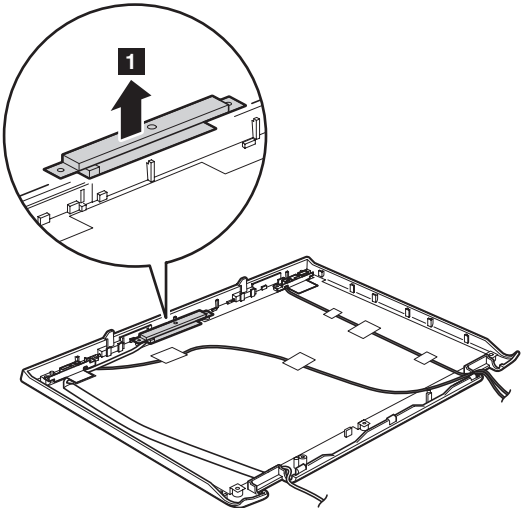
For MT 0698



| Step | Screw (quantity) | Color | Torque |
|----------|--|-------|-----------------------|
| 1 | M2.5 × 4 mm, flat-head, nylon-coated (2) | Black | 0.392 Nm (4 kgfcm) |

(continued)

For MT 0768 and 0769

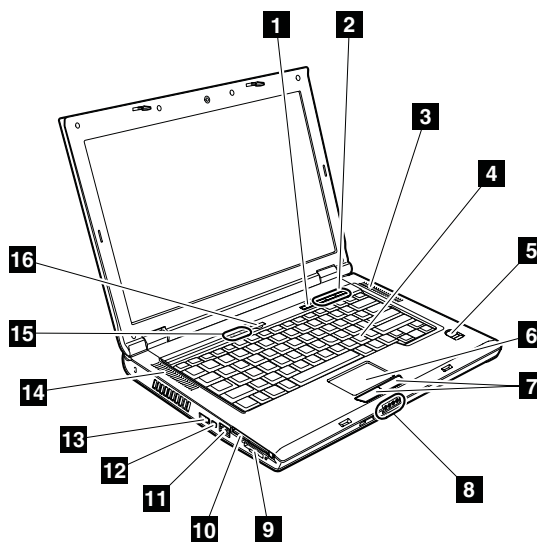


Locations

Front view

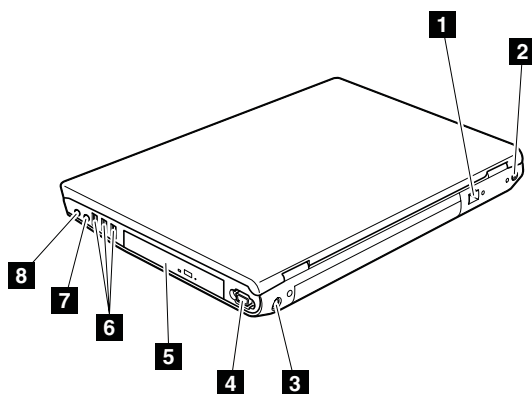
- 1** Lenovo Care button
- 2** Volume control buttons
- 3** Built-in stereo speaker (right)^{*1}
- 4** Keyboard
- 5** Fingerprint reader (for some models)
- 6** Touch pad
- 7** Touch pad buttons
- 8** System and power status indicators
Note: For the description of each indicator, see “Status indicators” on page 33.
- 9** 5-in-1 Digital Media Reader
- 10** PC Card/ExpressCard slot
- 11** RJ-45 (Ethernet) connector
- 12** IEEE1394 connector
- 13** Universal serial bus (USB) connector
- 14** Built-in stereo speaker (left)^{*1}
- 15** System and power status indicators
Note: For the description of each indicator, see “Status indicators” on page 33.
- 16** Power switch

Note: For MT 0769, built-in stereo speakers (*1) are under the palm rest.



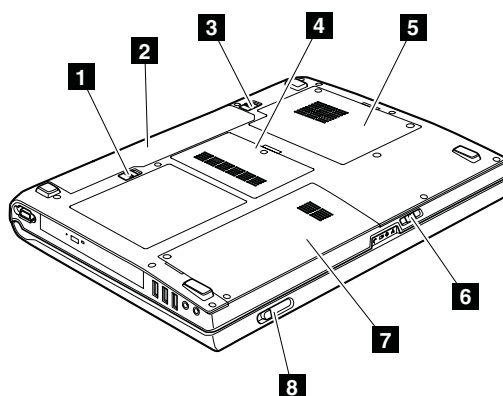
Rear view

- 1** RJ-11 (modem) connector
- 2** AC power connector
- 3** S-Video connector
- 4** External monitor connector
- 5** Optical drive
- 6** USB connectors
- 7** Microphone jack
- 8** Stereo headphone jack



Bottom view

- 1** Battery pack latch
- 2** Battery pack
- 3** Battery pack latch
- 4** Memory card slot
- 5** Thermal module slot
- 6** Wireless radio switch
- 7** Hard disk drive slot
- 8** LCD cover latch



Parts list

- Each FRU is available for all types or models, unless specific types or models are specified.
- FRU with specific models listed and described as xxU (where U is an example of a country designator) should be used for all models ending in U.
- FRU with specific models listed and described as 3Dx (where 3D is an example of a unique configuration) should be used for all of these models, unless specific country or region designator is specified.
- 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 the part is not a CRU. A single asterisk (*) means the part is an External CRU; two asterisks (**) means the part is an Internal CRU.

Lenovo 3000 computers contain the following types of the external CRUs:

External CRUs (pluggable)

These CRUs unplug from the computer. Examples of these types of CRUs include an ac adapter, an external keyboard, a mouse, a power cord, a port replicator, a USB device, and an external bay device adapter.

External CRUs with latches

These CRUs have a latch to help you to remove and replace the part. Examples of these types of CRUs include a battery pack, a cover such as a memory slot cover and a hard disk drive cover.

Lenovo 3000 computers contain the following types of the internal CRUs:

Internal CRUs (located behind an access panel)

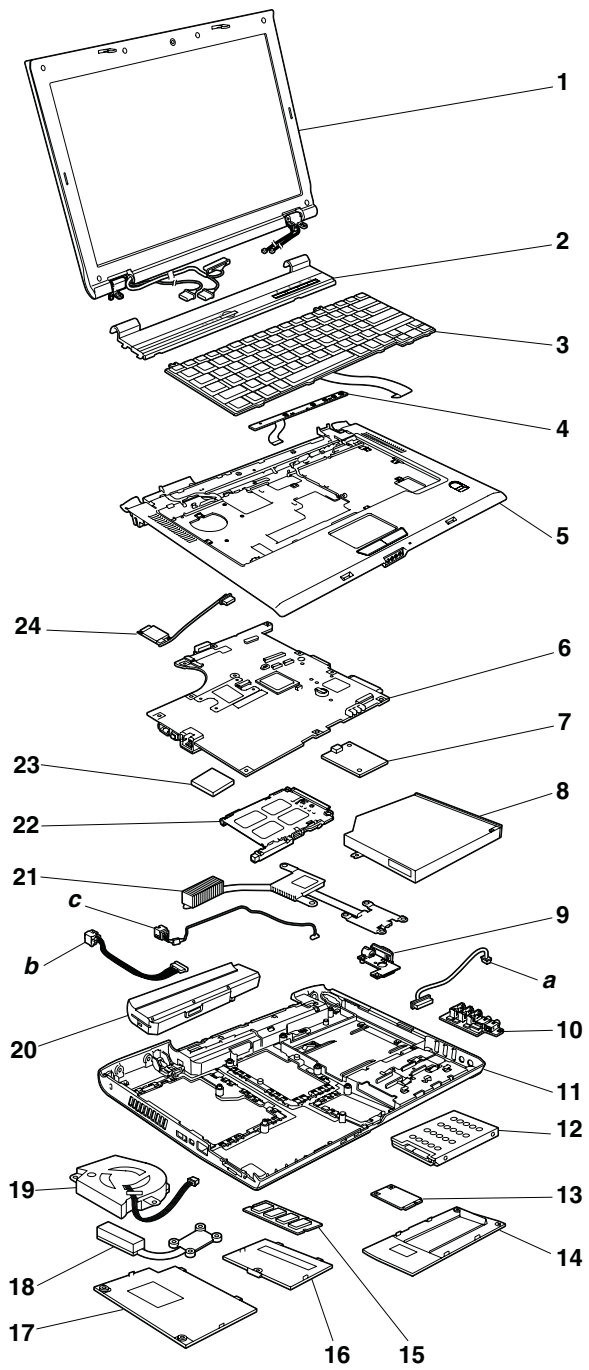
These CRUs are isolated parts within the computer that are concealed by an access panel that is typically secured by either one or two screws. Once the access panel is removed, only the specific CRU is visible. Examples of these types of CRUs include a memory card and a hard disk drive.

Internal CRUs (located within the product itself)

These CRUs are accessible only by opening the outer case of the computer. Examples of these CRUs include the parts beneath a cover and they are secured by either one or two screws.

- A RoHS compliant FRU is identified by an R. An N in the RoHS ID column means the part is not a RoHS compliant FRU.
- FRUs marked with **OP** are available as options.

Overall



Parts list

| No. | FRU | FRU no. | RoHS ID | CRU ID |
|--------------|---|---------|---------|--------|
| <i>a - c</i> | See "Miscellaneous parts" on page 152. | | | |
| 1 | LCD unit (see "LCD FRUs" on page 129.) | | | |
| 2 | Cover, strip (E cover) for MT 0689 and 0768 | 41W2115 | R | N |
| | Cover, strip for MT 0769 | 41R7807 | R | N |
| 3 | Keyboard (see "Keyboard" on page 136.) | | | |
| 4 | Function board for MT 0689 and 0768 | 41W1314 | R | N |
| | Function board for MT 0769 | 41R7790 | R | N |
| 5 | Top cover assembly, 14W (C cover) without fingerprint reader <ul style="list-style-type: none"> • 0689-2Ex, 2Lx, 2Mx, 2Nx, 2Px, 2Qx, 2Rx, 2Sx, 36x, 37x, 38x, 39x, 3Fx, 3Gx, 3Hx, 3Jx, 3Lx, 3Mx, 67x, 68x, 6Ax, 6Px, 6Xx, 6Yx, 73x, 76x, 7Tx, 82x, 83x, 84x, 86x, A4x, A8x, A9x, AAx, ABx, ACx, ADx, AEx, B2x, B3x, CCx, CDx, CQx, CVx, CWx, D2x, D3x, EAx, GGx, GHx | 42W3129 | R | N |
| | Top cover assembly, 14W (C cover) with fingerprint reader <ul style="list-style-type: none"> • 0689-22x, 24x, 25x, 26x, 27x, 28x, 29x, 2Ax, 2Bx, 2Fx, 2Hx, 2Jx, 2Kx, 2Tx, 31x, 33x, 34x, 3Ax, 3Bx, 3Cx, 3Dx, 3Kx, 41x, 42x, 43x, 44x, 52x, 54x, 55x, 56x, 57x, 59x, 5Ax, 5Bx, 5Cx, 5Dx, 5Fx, 5Gx, 5Hx, 5Jx, 5Kx, 5Lx, 5Mx, 5Nx, 5Px, 65x, 66x, 69x, 6Bx, 6Cx, 6Dx, 6Ex, 6Fx, 6Gx, 6Hx, 6Jx, 6Kx, 6Lx, 6Mx, 6Nx, 6Qx, 6Rx, 6Sx, 6Tx, 6Ux, 6Vx, 6Wx, 6Zx, 72x, 75x, 77x, 7Mx, 7Nx, 7Px, 7Qx, 7Rx, 7Sx, 7Ux, 7Vx, 7Wx, 85x, K2x, A5x, A6x, A7x, AFx, AGx, AHx, AJx, B4x, B5x, B6x, B7x, B8x, B9x, BAx, BBx, BCx, BEx, C3x, C5x, C7x, C9x, CBx, CFx, CGx, CHx, CJx, CKx, CLx, CMx, CNx, CPx, CRx, CXx, CYx, D4x, D5x, D8x, D9x, DBx, DCx, E2x, E3x, E4x, E5x, F2x, F3x, F4x, F5x, F7x, G3x, G4x, G7x, G8x, G9x, GAx, GBx, GCx, GDx, GEx, GFx, GJx | 42W3130 | R | N |

(continued)

| No. | FRU | FRU no. | RoHS ID | CRU ID |
|-----|---|---------|---------|--------|
| 5 | <p>Top cover assembly, 15W (C cover) without fingerprint reader for MT 0768</p> <ul style="list-style-type: none"> 0768-2Ax, 34x, 35x, 36x, 37x, 38x, 3Fx, 3Gx, 3Hx, 3Jx, 3Kx, 3Lx, 3Mx, 3Nx, 3Px, 3Qx, 3Rx, 3Sx, 3Tx, 3Ux, 3Vx, 3Wx, 4Mx, 4Px, 4Rx, 67x, 68x, 69x, 6Bx, 6Cx, 6Dx, 6Fx, 6Gx, 6Hx, 6Jx, 73x, 74x, 77x, 78x, 79x, 7Ax, 7Gx, 7Kx, 7Mx, 7Zx, 82x, 83x, 84x, 85x, 86x, A3x, A4x, A5x, A6x, A7x, A8x, A9x, ACx, ADx, AFx, AGx, AHx, B3x, B4x, B5x, BDx, BNx, BTx, C2x, CJx, CRx, CTx, CWx, D2x, D8x, DAx, DDx, DEx, DFx, DKx, E6x, EFx, EGx, EHx, EJx, EKx, ELx, G8x, GFx, GGx, GHx, GJx, GKx, GLx, GRx, GSx, GTx, GUx | 42W3131 | R | N |
| | <p>Top cover assembly, 15W (C cover) with fingerprint reader for MT 0768</p> <ul style="list-style-type: none"> 0768-21x, 22x, 25x, 26x, 27x, 28x, 2Cx, 31x, 33x, 3Bx, 3Cx, 3Dx, 3Ex, 3Yx, 41x, 45x, 46x, 47x, 48x, 49x, 4Ax, 4Bx, 4Cx, 4Dx, 4Ex, 4Fx, 4Gx, 4Hx, 4Jx, 4Kx, 4Lx, 4Qx, 4Sx, 52x, 53x, 54x, 55x, 56x, 57x, 58x, 59x, 5Ax, 5Bx, 5Cx, 5Dx, 5Ex, 5Fx, 5Gx, 5Hx, 5Jx, 5Kx, 5Lx, 5Nx, 5Px, 5Qx, 5Rx, 65x, 66x, 6Ax, 6Ex, 6Kx, 6Lx, 6Mx, 6Nx, 6Px, 6Qx, 6Rx, 6Sx, 6Tx, 6Ux, 6Vx, 6Wx, 6Xx, 6Yx, 6Zx, 72x, 75x, 76x, 7Bx, 7Cx, 7Dx, 7Ex, 7Fx, 7Hx, 7Jx, 7Lx, 7Nx, 7Px, 7Qx, 7Rx, 7Sx, 7Tx, 7Ux, 7Vx, 7Wx, 7Xx, 7Yx, CCx, K2x, A2x, AAx, ABx, AJx, B2x, B6x, B7x, B8x, B9x, BBx, BCx, BEx, BFx, BGx, BHx, BJx, BKx, BLx, BMx, BPx, BQx, BRx, BSx, C3x, C4x, C6x, C7x, C8x, C9x, CAx, CBx, CDx, CEx, CFx, CGx, CHx, CKx, CLx, CNx, CPx, CVx, Cx, CYx, D3x, D4x, D5x, D6x, DBx, DCx, DGx, DHx, DJx, DLx, E2x, E5x, E7x, ECx, F2x, F3x, F4x, F6x, F7x, F9x, FBx, FDx, FEx, FFx, FGx, FHx, FJx, G2x, G3x, G5x, G6x, G7x, GAx, GBx, GCx, GDx, GEx, GMx, GNx, GPx, GQx, GVx, GWx, GXx | 42W3132 | R | N |
| | <p>Top cover assembly, 15W without fingerprint reader for MT 0769</p> <ul style="list-style-type: none"> 0769-AAx, ABx, C8x, C9x, CBx, CDx, CJx, CKx, CQx, CRx, CYx, G5x | 41R7787 | R | N |
| | <p>Top cover assembly, 15W with fingerprint reader for MT 0769</p> <ul style="list-style-type: none"> 0769-A7x, A8x, A9x, ACx, ADx, B2x, B3x, B4x, C3x, C4x, C5x, C6x, C7x, CAx, CEx, CFx, CGx, CHx, CLx, CMx, CNx, CPx, CUx, CVx, CWx, Cx, CZx, D2x, D3x, D4x, D5x, D6x, D7x, G2x, G3x, G4x, G6x | 41R7788 | R | N |

(continued)

Parts list

| No. | FRU | FRU no. | RoHS ID | CRU ID |
|-----|--|---------|---------|--------|
| 6 | System board assembly, 14W • 0689- 2xx, 3xx, 4xx, 5xx, 6xx, 7xx, 8xx, K2x, Axx, Bxx, Cxx, Dxx | 41W1199 | R | N |
| | System board assembly, 14W • 0689-Exx, Fxx, Gxx | 41W8031 | R | N |
| | System board assembly, 15W integrated • 0768-25x, 26x, 2Ax, 31x, 33x, 34x, 35x, 36x, 37x, 38x, 3Bx, 3Cx, 3Dx, 3Ex, 3Fx, 3Gx, 3Hx, 3Jx, 3Kx, 3Lx, 3Mx, 3Nx, 3Px, 3Qx, 3Rx, 3Sx, 3Tx, 3Ux, 3Vx, 3Wx, 41x, 45x, 47x, 48x, 49x, 4Ax, 4Bx, 4Cx, 4Dx, 4Jx, 4Kx, 4Mx, 4Px, 4Qx, 4Rx, 55x, 56x, 65x, 66x, 67x, 68x, 69x, 6Ax, 6Bx, 6Cx, 6Dx, 6Ex, 6Fx, 6Gx, 6Hx, 6Jx, 6Kx, 6Lx, 6Sx, 6Tx, 6Ux, 6Vx, 73x, 74x, 76x, 77x, 78x, 79x, 7Ax, 7Gx, 7Jx, 7Lx, 7Mx, 7Sx, 7Tx, 7Ux, 7Vx, 7Wx, 7Xx, 82x, 83x, 84x, 85x, 86x, K2x, ACx, ADx, AFx, B3x, B4x, B5x, B6x, B8x, B9x, BBx, BCx, BGx, BMx, BNx, BPx, BQx, BRx, BTx, C2x, C6x, C7x, C8x, C9x, CAx, CBx, CDx, CEx, CJx, CRx, CTx, CWx, D2x, D3x, D5x, D6x, DBx, DCx, DDx, DEx, DFx, DKx, DLx, EFx, EKx | 41W1200 | R | N |

(continued)

| No. | FRU | FRU no. | RoHS ID | CRU ID |
|-----|--|---------|---------|--------|
| 6 | System board assembly, 15W integrated • 0768-E5x, E6x, EGx, EHx, EJx, ELx, F3x, F4x, F6x, F7x, FBx, FGx, FHx, G2x, G3x, GFx, GGx, GHx, GJx, GKx, GLx, GRx, GSx, GTx, GUx | 41W8032 | R | N |
| | System board assembly, 15W integrated • 0769-A7x, AAx, ABx, C3x, C4x, C5x, C6x, C7x, C8x, C9x, CAx, CBx, CDx, CEx, CFx, CGx, CHx, CJx, CKx, CLx, CMx, CNx, CPx, CQx, CRx, CUx, CYx, D3x, D6x, D7x, G4x, G5x | 41R7694 | R | N |
| | System board assembly, 15W discrete • 0768-21x, 22x, 27x, 28x, 2Cx, 3Yx, 46x, 4Ex, 4Fx, 4Gx, 4Hx, 4Lx, 4Sx, 52x, 53x, 54x, 57x, 58x, 59x, 5Ax, 5Bx, 5Cx, 5Dx, 5Ex, 5Fx, 5Gx, 5Hx, 5Jx, 5Kx, 5Lx, 5Nx, 5Px, 5Qx, 5Rx, 6Mx, 6Nx, 6Px, 6Qx, 6Rx, 6Wx, 6Xx, 6Yx, 6Zx, 72x, 75x, 7Bx, 7Cx, 7Dx, 7Ex, 7Fx, 7Hx, 7Kx, 7Nx, 7Px, 7Qx, 7Rx, 7Yx, 7Zx, CCx, A2x, A3x, A4x, A5x, A6x, A7x, A8x, A9x, AAx, ABx, AGx, AHx, AJx, B2x, B7x, BDx, BEx, BFx, BHx, BJx, BKx, BLx, BSx, C3x, C4x, CFx, CGx, CHx, CKx, CLx, CNx, CPx, CVx, CXx, CYx, D4x, D8x, DAx, DGx, DHx, DJx | 41W1201 | R | N |
| | System board assembly, 15W discrete • 0768-E2x, E7x, ECx, F2x, F9x, FDx, FEx, FFx, FJx, G5x, G6x, G7x, G8x, GAx, GBx, GCx, GDx, GEx, GMx, GNx, GPx, GQx, GVx, GWx, GXx | 41W8033 | R | N |
| | System board assembly, 15W discrete • 0769-A8x, A9x, ACx, ADx, B2x, B3x, B4x, CVx, CWx, CXx, CZx, D2x, D4x, D5x, G3x, G2x, G6x | 41R7695 | R | N |
| | Modem daughter card (MDC) • 0689-2xx, 3xx, 4xx, 5xx, 6xx, 7xx, 8xx, K2x • 0768-2xx, 3xx, 4xx, 5xx, 6xx, 7xx, 8xx, CCx, K2x | 41W1209 | R | N |
| 8 | Modem daughter card (MDC) • 0689-Axx, Bxx, Cxx, Dxx, Exx, Fxx, Gxx • 0768-Axx, Bxx, Cxx, Dxx, Exx, Fxx, Gxx • 0769-all | 42T0806 | R | N |
| | CD-ROM drive assembly, 12.7 mm • 0689-CTO • 0768-CTO | | | |
| | TEAC (CD224E-Nxx) | 27R2322 | R | ** |
| | TSST (TS-L162C) | 27R2316 | R | ** |

(continued)

Parts list

| No. | FRU | FRU no. | RoHS ID | CRU ID |
|-----|---|---------|---------|--------|
| 8 | DVD/CD-RW combo drive assembly, 12.7 mm, HLDS (GCC-4244) <ul style="list-style-type: none"> • 0689-24x, 25x, 26x, 2Ex, 2Hx, 2Jx, 2Lx, 2Mx, 2Nx, 2Px, 2Qx, 2Rx, 2Sx, 31x, 36x, 37x, 38x, 39x, 3Ax, 3Fx, 3Gx, 3Hx, 3Jx, 3Lx, 3Mx, 41x, 52x, 57x, 5Jx, 5Kx, 67x, 69x, 6Ax, 6Bx, 6Cx, 6Fx, 6Hx, 6Jx, 6Px, 6Qx, 6Tx, 6Xx, 6Yx, 72x, 73x, 76x, 77x, 7Rx, 7Sx, 7Tx, 7Ux, 7Vx, 7Wx, 82x, 86x, A4x, A8x, A9x, AAx, ABx, ACx, ADx, AEx, AFx, AGx, B2x, CCx, CQx, D2x, E2x, EAx, GGx • 0768-2Ax, 34x, 35x, 37x, 38x, 3Fx, 3Gx, 3Mx, 3Px, 3Qx, 3Rx, 3Sx, 3Ux, 3Vx, 3Wx, 3Yx, 4Mx, 4Px, 4Qx, 4Rx, 68x, 69x, 6Ax, 6Bx, 6Cx, 6Dx, 6Fx, 6Gx, 6Mx, 73x, 74x, 78x, 79x, 7Ax, 7Gx, 7Kx, 7Lx, 7Sx, 7Tx, 82x, 83x, A3x, A4x, A5x, A6x, A7x, A8x, A9x, ACx, ADx, AGx, B3x, CRx, CTx, D2x, DGx, DHx, DJx, GFx, GGx, GKx, GTx | 27R2357 | R | ** |
| | DVD/CD-RW combo drive assembly, 12.7 mm, TSST (TS-L462C CO01) <ul style="list-style-type: none"> • 0689-24x, 25x, 26x, 2Ex, 2Hx, 2Jx, 2Lx, 2Mx, 2Nx, 2Px, 2Qx, 2Rx, 2Sx, 31x, 36x, 37x, 38x, 39x, 3Ax, 3Fx, 3Gx, 3Hx, 3Jx, 3Lx, 3Mx, 41x, 52x, 57x, 5Jx, 5Kx, 67x, 69x, 6Ax, 6Bx, 6Cx, 6Fx, 6Hx, 6Jx, 6Px, 6Qx, 6Tx, 6Xx, 6Yx, 72x, 73x, 76x, 77x, 7Rx, 7Sx, 7Tx, 7Ux, 7Vx, 7Wx, 82x, 86x • 0768-2Ax, 34x, 35x, 37x, 38x, 3Fx, 3Gx, 3Mx, 3Px, 3Qx, 3Rx, 3Sx, 3Ux, 3Vx, 3Wx, 3Yx, 4Mx, 4Px, 4Qx, 4Rx, 68x, 69x, 6Ax, 6Bx, 6Cx, 6Dx, 6Fx, 6Gx, 6Mx, 73x, 74x, 78x, 79x, 7Ax, 7Gx, 7Kx, 7Lx, 7Sx, 7Tx, 82x, 83x | 27R2325 | R | ** |
| | DVD/CD-RW combo drive assembly, 12.7 mm, Panasonic <ul style="list-style-type: none"> • 0689-A4x, A8x, A9x, AAx, ABx, ACx, ADx, AEx, AFx, AGx, B2x, CCx, CQx, D2x, E2x, EAx, GGx • 0768-A3x, A4x, A5x, A6x, A7x, A8x, A9x, ACx, ADx, AGx, B3x, CRx, CTx, D2x, DGx, DHx, DJx, GFx, GGx, GKx, GTx | 42T2001 | R | ** |

(continued)

| No. | FRU | FRU no. | RoHS ID | CRU ID |
|-----|--|---------|---------|--------|
| 8 | DVD/CD-RW combo drive assembly, 12.7 mm • 0769-C5x, C6x, C7x, C9x, CBx, CDx, CGx, CHx, CJx, CKx, CNx, CPx, CQx, CRx, G5x | | | |
| | HLDS | 42T2014 | R | ** |
| | Panasonic | 42T2037 | R | ** |
| | DVD-RAM/RW drive assembly, 12.7 mm, HLDS (GMA-4082) • 0689-22x, 27x, 28x, 29x, 2Ax, 2Bx, 2Fx, 2Kx, 2Tx, 33x, 34x, 3Bx, 3Cx, 3Dx, 3Kx, 42x, 43x, 44x, 54x, 55x, 56x, 59x, 5Ax, 5Bx, 5Cx, 5Dx, 5Fx, 5Gx, 5Hx, 5Lx, 5Mx, 5Nx, 5Px, 65x, 66x, 68x, 6Dx, 6Ex, 6Gx, 6Kx, 6Lx, 6Mx, 6Nx, 6Rx, 6Sx, 6Ux, 6Vx, 6Wx, 6Zx, 75x, 7Mx, 7Nx, 7Px, 7Qx, 83x, 84x, 85x, K2x, A5x, A6x, A7x, AHx, AJx, B3x, B4x, B5x, B6x, B7x, B8x, B9x, BAx, BBx, BCx, BEx, C3x, C5x, C7x, C9x, CBx, CDx, CFx, CGx, CHx, CJx, CKx, CLx, CMx, CNx, CPx, CRx, CVx, CWx, CXx, CYx, D3x, D4x, D5x, D8x, D9x, DBx, DCx, E3x, E4x, E5x, F2x, F3x, F4x, F5x, F7x, F8x, G3x, G4x, G7x, G8x, G9x, GAx, GBx, GCx, GDx, GEx, GFx, GHx, GKx, GLx, GMx, GNx, GPx, GQx, GRx, GSx, GTx, GUx • 0768-21x, 22x, 25x, 26x, 27x, 28x, 2Cx, 31x, 33x, 36x, 3Bx, 3Cx, 3Dx, 3Ex, 3Hx, 3Jx, 3Kx, 3Lx, 3Nx, 3Tx, 41x, 45x, 46x, 47x, 48x, 49x, 4Ax, 4Bx, 4Cx, 4Dx, 4Ex, 4Fx, 4Gx, 4Hx, 4Jx, 4Kx, 4Lx, 4Sx, 52x, 53x, 54x, 55x, 56x, 57x, 58x, 59x, 5Ax, 5Bx, 5Cx, 5Dx, 5Ex, 5Fx, 5Gx, 5Hx, 5Jx, 5Kx, 5Lx, 5Nx, 5Px, 5Qx, 5Rx, 65x, 66x, 67x, 6Ex, 6Hx, 6Jx, 6Kx, 6Lx, 6Nx, 6Px, 6Qx, 6Rx, 6Sx, 6Tx, 6Ux, 6Vx, 6Wx, 6Xx, 6Yx, 6Zx, 72x, 75x, 76x, 77x, 7Bx, 7Cx, 7Dx, 7Ex, 7Fx, 7Hx, 7Jx, 7Mx, 7Nx, 7Px, 7Qx, 7Rx, 7Ux, 7Vx, 7Wx, 7Xx, 7Yx, 7Zx, 84x, 85x, 86x, CCx, K2x, A2x, AAx, ABx, AFx, AHx, AJx, B2x, B4x, B5x, B6x, B7x, B8x, B9x, BBx, BCx, BDx, BEx, BFx, BGx, BHx, BJx, BKx, BLx, BMx, BNx, BPx, BQx, BRx, BSx, BTx, C2x, C3x, C4x, C6x, C7x, C8x, C9x, CAx, CBx, CDx, CEx, CFx, CGx, CHx, CJx, CKx, CLx, CNx, CPx, CVx, CWx, CXx, CYx, D3x, D4x, D5x, D6x, D8x, DAx, DBx, DCx, DDx, DEx, DFx, DKx, DLx, E2x, E5x, E6x, E7x, ECx, EFx, EGx, EHx, EJx, EKx, ELx, F2x, F3x, F4x, F6x, F7x, F9x, FBx, FDx, FEx, FFx, FGx, FHx, FJx, G2x, G3x, G5x, G6x, G7x, G8x, GAx, GBx, GCx, GDx, GEx, GHx, GJx, GLx, GMx, GNx, GPx, GQx, GRx, GSx, GUx, GVx, GWx, GXx | 27R2360 | R | ** |

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Parts list

| No. | FRU | FRU no. | RoHS ID | CRU ID |
|-----|--|---------|---------|--------|
| 8 | DVD-RAM/RW drive assembly, 12.7 mm, TSST (TS-L632C) <ul style="list-style-type: none"> 0689-22x, 27x, 28x, 29x, 2Ax, 2Bx, 2Fx, 2Kx, 2Tx, 33x, 34x, 3Bx, 3Cx, 3Dx, 3Kx, 42x, 43x, 44x, 54x, 55x, 56x, 59x, 5Ax, 5Bx, 5Cx, 5Dx, 5Fx, 5Gx, 5Hx, 5Lx, 5Mx, 5Nx, 5Px, 65x, 66x, 68x, 6Dx, 6Ex, 6Gx, 6Kx, 6Lx, 6Mx, 6Nx, 6Rx, 6Sx, 6Ux, 6Vx, 6Wx, 6Zx, 75x, 7Mx, 7Nx, 7Px, 7Qx, 83x, 84x, 85x, K2x 0768-21x, 22x, 25x, 26x, 27x, 28x, 2Cx, 31x, 33x, 36x, 3Bx, 3Cx, 3Dx, 3Ex, 3Hx, 3Hx, 3Jx, 3Kx, 3Lx, 3Nx, 3Tx, 41x, 45x, 46x, 47x, 48x, 49x, 4Ax, 4Bx, 4Cx, 4Dx, 4Ex, 4Fx, 4Gx, 4Hx, 4Jx, 4Kx, 4Lx, 4Sx, 52x, 53x, 54x, 55x, 56x, 57x, 58x, 59x, 5Ax, 5Bx, 5Cx, 5Dx, 5Ex, 5Fx, 5Gx, 5Hx, 5Jx, 5Kx, 5Lx, 5Nx, 5Px, 5Qx, 5Rx, 65x, 66x, 67x, 6Ex, 6Hx, 6Jx, 6Kx, 6Lx, 6Nx, 6Px, 6Qx, 6Rx, 6Sx, 6Tx, 6Ux, 6Vx, 6Wx, 6Xx, 6Yx, 6Zx, 72x, 75x, 76x, 77x, 7Bx, 7Cx, 7Dx, 7Ex, 7Fx, 7Hx, 7Jx, 7Mx, 7Nx, 7Px, 7Qx, 7Rx, 7Ux, 7Vx, 7Wx, 7Xx, 7Yx, 7Zx, 84x, 85x, 86x, CCx, K2x | 27R2331 | R | ** |
| | DVD-RAM/RW drive assembly, 12.7 mm, Panasonic <ul style="list-style-type: none"> 0689-A5x, A6x, A7x, AHx, AJx, B3x, B4x, B5x, B6x, B7x, B8x, B9x, BAx, BBx, BCx, BEx, C3x, C5x, C7x, C9x, CBx, CDx, CFx, CGx, CHx, CJx, CKx, CLx, CMx, CNx, CPx, CRx, CVx, CWx, Cx, CYx, D3x, D4x, D5x, D8x, D9x, DBx, DCx, E3x, E4x, E5x, F2x, F3x, F4x, F5x, F7x, F8x, G3x, G4x, G7x, G8x, G9x, GAx, GBx, GCx, GDx, GEx, GFx, GHx, GKx, GLx, GMx, GNx, GPx, GQx, GRx, GSx, GTx, GUx 0768-A2x, AAx, ABx, AFx, AHx, AJx, B2x, B4x, B5x, B6x, B7x, B8x, B9x, BBx, BCx, BDx, BEx, Bfx, BGx, BHx, BJx, BKx, BLx, BMx, BNx, BPx, BQx, BRx, BSx, BTx, C2x, C3x, C4x, C6x, C7x, C8x, C9x, CAx, CBx, CDx, CEx, CFx, CGx, CHx, CJx, CKx, CLx, CNx, CPx, CRx, CTx, CVx, CYx, D3x, D4x, D5x, D6x, D8x, DAx, DBx, DCx, DDx, DEx, DFx, E2x, E5x, E6x, E7x, ECx, Efx, EGx, EHx, EJx, EKx, ELx, F2x, F3x, F4x, F6x, F7x, F9x, FBx, FDx, FEx, FFx, FGx, FHx, FJx, G2x, G3x, G5x, G6x, G7x, G8x, GAx, GBx, GCx, GDx, GEx, GHx, GJx, GLx, GMx, GNx, GPx, GQx, GRx, GSx, GUx, GVx, GWx, GXx | 42T2003 | R | ** |
| | DVD-RAM/RW drive assembly, 12.7 mm <ul style="list-style-type: none"> 0769-A7x, A8x, A9x, AAx, ABx, ACx, ADx, B2x, B3x, B4x, C3x, C4x, C8x, CAx, CEx, CFx, CLx, CMx, CUx, CVx, CWx, Cx, CYx, CZx, D2x, D3x, D4x, D5x, D6x, D7x, G2x, G3x, G4x, G6x | | | |
| | HLDS | 42T2019 | R | ** |
| | Panasonic | 42T2009 | R | ** |
| 9 | VGA connector card 14W/15W for MT 0768 | 41W1315 | R | N |
| | VGA connector card 15R <ul style="list-style-type: none"> 0768-Axx, Bxx, Cxx, Dxx, Exx, Fxx, Gxx 0769-all | 41W1438 | R | N |

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| No. | FRU | FRU no. | RoHS ID | CRU ID |
|-----|--|---------|---------|--------|
| 10 | USB/Audio connector card for MT 0689 and 0768 | 41W1316 | R | N |
| | USB/Audio connector card • 0768-Axx, Bxx, Cxx, Dxx, Exx, Fxx, Gxx • 0769-all | 41W1439 | R | N |
| 11 | Bottom cover assembly for MT 0689, 14W (D cover) | 41W5221 | R | N |
| | Bottom cover assembly for MT 0768, 15W (D cover) | 41W5222 | R | N |
| | Bottom cover assembly for MT 0769, integrated • 0769-A7x, AAx, ABx, C3x, C4x, C5x, C6x, C7x, C8x, C9x, CAx, CBx, CDx, CEx, CFx, CGx, CHx, CJx, CKx, CLx, CMx, CNx, CPx, CQx, CRx, CUx, CYx, D3x, D6x, D7x, G4x, G5x | 41R7791 | R | N |
| | Bottom cover assembly for MT 0769, discrete • 0769-A8x, A9x, ACx, ADx, B2x, B3x, B4x, CVx, CWx, CXx, CZx, D2x, D4x, D5x, G3x, G2x, G6x | 41R7792 | R | N |
| 12 | SATA hard disk drive, 40 GB, 9.5 mm, 5,400 rpm • 0689-25x, 26x, 31x, 39x, 3Fx, 3Lx, 41x, 67x, 6Jx, 6Px, 73x, 7Rx, 7Sx, 7Wx, 82x, 86x • 0768-2Ax, 37x, 38x, 3Lx, 4Px, 67x, 78x, 79x, 7Sx, 7Tx, 82x, 83x, ACx, DGx, DJx | | | |
| | Hitachi | 92P6277 | R | ** |
| | Toshiba | 92P6279 | R | ** |
| | SATA hard disk drive, 40 GB, 9.5 mm, 5,400 rpm, Fujitsu • 0768-ACx, DGx, DJx | 42T1601 | R | ** |
| | SATA hard disk drive, 60 GB, 9.5 mm, 5,400 rpm • 0689-24x, 2Lx, 3Ax, 3Bx, 3Jx, 3Mx, 57x, 5Jx, 68x, 69x, 6Hx, 6Qx, 6Rx, 6Xx, 6Yx, 72x, 76x, 7Vx, 84x, 85x, A8x, A9x, AAx, ABx, ACx, B2x, B3x, BAx, CCx, CDx, CWx, D2x, D3x, EAx, GGx, GLx, GMx • 0768-3Mx, 3Nx, 3Sx, 3Tx, 3Yx, 4Qx, 4Rx, 68x, 69x, 6Ax, 6Dx, 6Mx, 73x, 77x, 7Ax, 7Gx, 7Hx, 7Mx, 84x, A3x, A4x, A5x, A6x, B3x, B4x, B5x, B6x, C2x, CRx, CTx, D2x, D5x, D6x, GKx, GTx | | | |
| | Hitachi | 41R7714 | R | ** |
| | Toshiba | 92P6285 | R | ** |
| | SATA hard disk drive, 60 GB, 9.5 mm, 5,400 rpm, Fujitsu • 0689-A8x, A9x, AAx, ABx, ACx, B2x, B3x, Bax, CCx, CDx, CWx, D2x, D3x, EAx, GGx, GLx, GMx • 0768-A3x, A4x, A5x, A6x, B3x, B4x, B5x, B6x, C2x, CRx, CTx, D2x, D5x, D6x, GKx, GTx | 41R7715 | R | ** |

(continued)

Parts list

| No. | FRU | FRU no. | RoHS ID | CRU ID |
|-----|---|---------|---------|--------|
| 12 | <p>SATA hard disk drive, 80 GB, 9.5 mm, 5,400 rpm, Toshiba</p> <ul style="list-style-type: none"> • 0689-22x, 27x, 28x, 29x, 2Ex, 2Hx, 2Jx, 2Kx, 2Mx, 2Nx, 2Px, 2Qx, 2Rx, 2Sx, 2Tx, 34x, 37x, 38x, 3Cx, 3Dx, 3Gx, 3Hx, 42x, 43x, 52x, 54x, 56x, 59x, 5Ax, 5Fx, 5Kx, 5Lx, 5Mx, 5Px, 65x, 66x, 6Ax, 6Bx, 6Cx, 6Dx, 6Ex, 6Fx, 6Kx, 6Lx, 6Mx, 6Nx, 6Sx, 6Tx, 6Ux, 6Vx, 6Wx, 6Zx, 75x, 77x, 7Mx, 7Nx, 7Px, 7Qx, 7Tx, 7Ux, 83x, K2x, A4x, A6x, ADx, AEx, AFx, AGx, AHx, AJx, B4x, B5x, B6x, B9x, BBx, BEx, C3x, C5x, CFx, CJx, CKx, CLx, CMx, CNx, CPx, CQx, CRx, CVx, Cx, D4x, D8x, D9x, E2x, E4x, F2x, F4x, F8x, G3x, G4x, G8x, GHx, GNx, GQx, GRx • 0768-25x, 26x, 31x, 34x, 35x, 36x, 3Bx, 3Cx, 3Dx, 3Ex, 3Gx, 3Hx, 3Px, 3Qx, 3Rx, 3Ux, 3Vx, 3Wx, 41x, 45x, 46x, 47x, 48x, 49x, 4Ax, 4Bx, 4Cx, 4Dx, 4Ex, 4Fx, 4Hx, 4Jx, 4Kx, 4Lx, 4Mx, 4Sx, 53x, 54x, 56x, 58x, 5Dx, 5Ex, 5Gx, 5Hx, 5Jx, 5Kx, 5Lx, 5Nx, 5Rx, 65x, 66x, 6Bx, 6Cx, 6Ex, 6Fx, 6Gx, 6Hx, 6Jx, 6Kx, 6Lx, 6Sx, 6Tx, 6Ux, 6Vx, 6Wx, 6Xx, 6Yx, 74x, 76x, 7Bx, 7Cx, 7Dx, 7Jx, 7Kx, 7Nx, 7Px, 85x, CCx, A7x, A8x, A9x, AAx, ABx, ADx, AFx, AGx, B7x, B8x, B9x, BCx, BMx, BNx, BPx, BQx, BRx, BTx, C3x, C4x, CFx, CJx, CLx, CWx, D3x, D4x, D8x, DAx, DCx, DHx, DKx, EHx, EJx, EKx, ELx, F3x, F4x, F6x, FBx, FGx, FHx, G5x, G6x, G8x, GFx, GGx, GHx, GJx, GLx, GNx, GRx, GSx, GUx, GWx | 27R2305 | R | ** |
| | <p>SATA hard disk drive, 80 GB, 9.5 mm, 5,400 rpm, Hitachi</p> <ul style="list-style-type: none"> • 0689-22x, 27x, 28x, 29x, 2Ex, 2Hx, 2Jx, 2Kx, 2Mx, 2Nx, 2Px, 2Qx, 2Rx, 2Sx, 2Tx, 34x, 37x, 38x, 3Cx, 3Dx, 3Gx, 3Hx, 42x, 43x, 52x, 54x, 56x, 59x, 5Ax, 5Fx, 5Kx, 5Lx, 5Mx, 5Px, 65x, 66x, 6Ax, 6Bx, 6Cx, 6Dx, 6Ex, 6Fx, 6Kx, 6Lx, 6Mx, 6Nx, 6Sx, 6Tx, 6Ux, 6Vx, 6Wx, 6Zx, 75x, 77x, 7Mx, 7Nx, 7Px, 7Qx, 7Tx, 7Ux, 83x, K2x, A4x, A6x, ADx, AEx, AFx, AGx, AHx, AJx, B4x, B5x, B6x, B9x, BBx, BEx, C3x, C5x, CFx, CJx, CKx, CLx, CMx, CNx, CPx, CQx, CRx, CVx, Cx, D4x, D8x, D9x, E2x, E4x, F2x, F4x, F8x, G3x, G4x, G8x, GHx, GNx, GQx, GRx • 0768-25x, 26x, 31x, 34x, 35x, 36x, 3Bx, 3Cx, 3Dx, 3Ex, 3Gx, 3Hx, 3Px, 3Qx, 3Rx, 3Ux, 3Vx, 3Wx, 41x, 45x, 46x, 47x, 48x, 49x, 4Ax, 4Bx, 4Cx, 4Dx, 4Ex, 4Fx, 4Hx, 4Jx, 4Kx, 4Lx, 4Mx, 4Sx, 53x, 54x, 56x, 58x, 5Dx, 5Ex, 5Gx, 5Hx, 5Jx, 5Kx, 5Lx, 5Nx, 5Rx, 65x, 66x, 6Bx, 6Cx, 6Ex, 6Fx, 6Gx, 6Hx, 6Jx, 6Kx, 6Lx, 6Sx, 6Tx, 6Ux, 6Vx, 6Wx, 6Xx, 6Yx, 74x, 76x, 7Bx, 7Cx, 7Dx, 7Jx, 7Kx, 7Nx, 7Px, 85x, CCx, A7x, A8x, A9x, AAx, ABx, ADx, AFx, AGx, B7x, B8x, B9x, BCx, BMx, BNx, BPx, BQx, BRx, BTx, C3x, C4x, CFx, CJx, CLx, CWx, D3x, D4x, D8x, DAx, DCx, DHx, DKx, EHx, EJx, EKx, ELx, F3x, F4x, F6x, FBx, FGx, FHx, G5x, G6x, G8x, GFx, GGx, GHx, GJx, GLx, GNx, GRx, GSx, GUx, GWx • 0769-AAx, C5x, C6x, C7x, C9x, CBx, CDx, CGx, CHx, CJx, CKx, CNx, CPx, CQx, CRx, G5x | 41R7717 | R | ** |

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| No. | FRU | FRU no. | RoHS ID | CRU ID |
|-----|---|---------|---------|--------|
| 12 | SATA hard disk drive, 80 GB, 9.5 mm, 5,400 rpm, Fujitsu <ul style="list-style-type: none"> • 0689-A4x, A6x, ADx, AEx, AFx, AGx, AHx, AJx, B4x, B5x, B6x, B9x, BBx, BEx, C3x, C5x, CFx, CJx, CKx, CLx, CMx, CNx, CPx, CQx, CRx, CVx, CXx, D4x, D8x, D9x, E2x, E4x, F2x, F4x, F8x, G3x, G4x, G8x, GHx, GNx, GQx, GRx • 0768-A7x, A8x, A9x, AAx, ABx, ADx, AFx, AGx, B7x, B8x, B9x, BCx, BMx, BNx, BPx, BQx, BRx, BTx, C3x, C4x, CFx, CJx, CLx, CWx, D3x, D4x, D8x, DAx, DCx, DHx, DKx, EHx, EJx, EKx, ELx, F3x, F4x, F6x, FBx, FGx, FHx, G5x, G6x, G8x, GFx, GGx, GHx, GJx, GLx, GNx, GRx, GSx, GUx, GWx • 0769-AAx, C5x, C6x, C7x, C9x, CBx, CDx, CGx, CHx, CJx, CKx, CNx, CPx, CQx, CRx, G5x | 41R7718 | R | ** |
| | SATA hard disk drive, 80 GB, 9.5 mm, 5,400 rpm, Seagate <ul style="list-style-type: none"> • 0769-AAx, C5x, C6x, C7x, C9x, CBx, CDx, CGx, CHx, CJx, CKx, CNx, CPx, CQx, CRx, G5x | 42T1652 | R | ** |
| | SATA hard disk drive, 100 GB, 9.5 mm, 5,400 rpm <ul style="list-style-type: none"> • 0689-2Ax, 2Bx, 2Fx, 33x, 36x, 3Kx, 44x, 55x, 5Bx, 5Cx, 5Dx, 5Gx, 5Hx, 5Nx, 6Gx, A5x, A7x, B7x, BCx, C7x, C8x, C9x, CBx, CGx, CHx, CYx, D5x, DBx, DCx, F3x, G7x, GBx, GCx, GDx, GEx, GFx • 0768-21x, 22x, 27x, 28x, 2Cx, 33x, 3Fx, 3Jx, 3Kx, 4Gx, 52x, 55x, 57x, 59x, 5Ax, 5Bx, 5Cx, 5Fx, 5Px, 5Qx, 6Nx, 6Px, 6Qx, 6Rx, 6Zx, 72x, 75x, 7Ex, 7Fx, 7Lx, 7Qx, 7Rx, 7Ux, 7Vx, 7Wx, 7Xx, 7Yx, 7Zx, 86x, K2x, AHx, B2x, BBx, BDx, BGx, BHx, BJx, BKx, BLx, BSx, C6x, C7x, C8x, C9x, CAx, CBx, CDx, CEx, CGx, CKx, CNx, CVx, DDx, DEx, G2x, G3x, G7x, GAx, GBx, GCx, GDx, GEx | | | |
| | Hitachi | 27R2309 | R | ** |
| | Toshiba | 27R2311 | R | ** |

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Parts list

| No. | FRU | FRU no. | RoHS ID | CRU ID |
|-----|---|---------|---------|--------|
| 12 | SATA hard disk drive, 100 GB, 9.5 mm, 5,400 rpm, Fujitsu <ul style="list-style-type: none"> • 0689-A5x, A7x, B7x, BCx, C7x, C8x, C9x, CBx, CGx, CHx, CYx, D5x, DBx, DCx, F3x G7x, GBx, GCx, GDx, GEx, GFx • 0768-AHx, B2x, BBx, BDx, BGx, BHx, BJx, BKx, BLx, BSx, C6x, C7x, C8x, C9x, CAx, CBx, CDx, CEx, CGx, CKx, CNx, CVx, DDx, DEx, G2x, G3x, G7x, GAx, GBx, GCx, GDx, GEx | 42T1607 | R | ** |
| | SATA hard disk drive, 120 GB, 9.5 mm, 5,400 rpm, Toshiba <ul style="list-style-type: none"> • 0689-B8x, E3x, E5x, F5x, F7x, G9x, GAx, GKx, GPx, GSx, GTx, GUx • 0768-A2x, AJx, BEx, BFx, CHx, CPx, Cx, CYx, DBx, Dfx, DLx, E2x, E5x, E6x, E7x, ECx, Efx, EGx, F2x, F7x, F9x, FDx, FEx, FFx, FJx, GMx, GPx, GQx, GVx, GXx | 41T1615 | R | ** |
| | SATA hard disk drive, 120 GB, 9.5 mm, 5,400 rpm, Fujitsu <ul style="list-style-type: none"> • 0689-B8x, E3x, E5x, F5x, F7x, G9x, GAx, GKx, GPx, GSx, GTx, GUx • 0768-A2x, AJx, BEx, BFx, CHx, CPx, Cx, CYx, DBx, Dfx, DLx, E2x, E5x, E6x, E7x, ECx, Efx, EGx, F2x, F7x, F9x, FDx, FEx, FFx, FJx, GMx, GPx, GQx, GVx, GXx • 0769-ABx, ACx, B2x, B3x, C3x, C4x, C8x, CAx, CEx, CFx, CLx, CMx, CUx, CVx, CWx, CYx, D2x, D3x, D5x, D6x, D7x, G3x, G4x, G6x | 41R7721 | R | ** |
| | SATA hard disk drive, 120 GB, 9.5 mm, 5,400 rpm <ul style="list-style-type: none"> • 0769-ABx, ACx, B2x, B3x, C3x, C4x, C8x, CAx, CEx, CFx, CLx, CMx, CUx, CVx, CWx, CYx, D2x, D3x, D5x, D6x, D7x, G3x, G4x, G6x | | | |
| | Hitachi | 41R7720 | R | ** |
| | Seagate | 42T1653 | R | ** |
| | SATA hard disk drive, 160 GB, 9.5 mm, 5,400 rpm <ul style="list-style-type: none"> • 0769-A7x, A8x, A9x, ADx, B4x, Cx, CZx, D4x, G2x | | | |
| | Hitachi | 41R7723 | R | ** |
| | Seagate | 42T1654 | R | ** |

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| No. | FRU | FRU no. | RoHS ID | CRU ID |
|----------|--|---------|---------|--------|
| 13 | Intel PRO Wireless 3945ABG Mini-PCI Express Adapter | | | |
| | <ul style="list-style-type: none"> 0689-22x, 24x, 28x, 29x, 2Ax, 2Bx, 2Ex, 2Fx, 2Kx, 2Qx, 2Sx, 2Tx, 33x, 34x, 37x, 38x, 3Ax, 3Bx, 3Cx, 3Dx, 3Fx, 3Hx, 3Lx, 3Mx, 41x, 42x, 43x, 44x, 52x, 54x, 55x, 56x, 5Ax, 5Bx, 5Cx, 5Dx, 5Fx, 5Gx, 5Hx, 5Jx, 5Kx, 5Lx, 5Mx, 5Nx, 5Px, 6Ax, 6Dx, 6Ex, 6Fx, 6Gx, 6Hx, 6Jx, 6Kx, 6Lx, 6Mx, 6Nx, 6Px, 6Qx, 6Rx, 6Sx, 6Tx, 6Ux, 6Vx, 6Wx, 6Xx, 6Yx, 6Zx, 7Mx, 7Nx, 7Px, 7Qx, 7Tx, 7Ux, 82x, 83x, K2x, A4x, A5x, A6x, ACx, ADx, AEx, AFx, AGx, AHx, AJx, B3x, B4x, B5x, B7x, B8x, B9x, BBx, BCx, BEx, C7x, C9x, CDx, CFx, CJx, CKx, CLx, CMx, CNx, CPx, CQx, CRx, CWx, D3x, D4x, D5x, D8x, D9x, DBx, E3x, F2x, F3x, F7x, F8x, G3x, G4x, G9x, GAx, GDx, GGx, GHx, GKx, GPx, GQx, GTx, GUx 0768-21x, 22x, 25x, 26x, 27x, 28x, 2Ax, 2Cx, 34x, 35x, 36x, 38x, 3Bx, 3Cx, 3Dx, 3Ex, 3Gx, 3Hx, 3Sx, 3Tx, 3Yx, 46x, 47x, 49x, 4Ax, 4Bx, 4Cx, 4Dx, 4Ex, 4Gx, 4Hx, 4Jx, 4Kx, 4Lx, 4Px, 4Qx, 4Rx, 4Sx, 52x, 53x, 54x, 55x, 56x, 57x, 58x, 59x, 5Ax, 5Bx, 5Cx, 5Dx, 5Ex, 5Fx, 5Gx, 5Hx, 5Jx, 5Kx, 5Lx, 5Nx, 5Px, 5Qx, 5Rx, 6Dx, 6Ex, 6Fx, 6Gx, 6Hx, 6Jx, 6Kx, 6Lx, 6Mx, 6Nx, 6Px, 6Qx, 6Rx, 6Sx, 6Tx, 6Ux, 6Vx, 6Wx, 6Xx, 6Yx, 6Zx, 75x, 76x, 77x, 78x, 79x, 7Ax, 7Bx, 7Cx, 7Dx, 7Ex, 7Fx, 7Gx, 7Hx, 7Jx, 7Kx, 7Lx, 7Mx, 7Nx, 7Px, 7Qx, 7Rx, 7Ux, 7Vx, 7Wx, 7Xx, 7Yx, 7Zx, CCx, K2x, A7x, A8x, A9x, AAx, ABx, AFx, AGx, AHx, B2x, B6x, B7x, B8x, B9x, BBx, BCx, BFx, BGx, BJx, BKx, BLx, BMx, BNx, BQx, BRx, BSx, BTx, C3x, C4x, CFx, CGx, CLx, CNx, CXx, D2x, D3x, D4x, D5x, D6x, D8x, DAx, DCx, DDx, DEx, DKx, DLx, E5x, E6x, ECx, EFx, F2x, F3x, F4x, F6x, F7x, FBx, FDx, FEx, FFx, FGx, FHx, FJx, G2x, G3x, G5x, G6x, G8x, GDx, GFx, GGx, GHx, GJx, GKx, GLx, GNx, GPx, GQx, GRx, GSx, GTx, GUx, GWx, GXx 0769-A7x, ADx, C5x, C6x, C7x, C8x, C9x, CAx, CGx, CHx, CNx, CPx, CUx, CXx, CYx, D2x, D3x, D4x, G4x | | | |
| | xxA, xxB, xxF, xxH, xxL, xxM, xxP, xxQ, xxS, xxU, xxV, xxY | 42T0853 | R | ** |
| | xxK | 42T0857 | R | ** |
| | xxE, xxJ | 42T0859 | R | ** |
| | xxG, xxT, xxR (802.11 b/g) | 42T0861 | R | ** |
| | Broadcom 802.11ag WLAN PCI-E Mini Card | | | |
| | <ul style="list-style-type: none"> 0689-25x, 26x, 27x, 2Hx, 2Jx, 2Lx, 2Mx, 2Nx, 2Px, 2Rx, 31x, 36x, 39x, 3Gx, 3Jx, 3Kx, 57x, 59x, 65x, 66x, 67x, 68x, 69x, 6Bx, 6Cx, 72x, 73x, 75x, 76x, 77x, 7Rx, 7Sx, 7Vx, 7Wx, 84x, 85x, 86x 0768-31x, 33x, 37x, 3Fx, 3Jx, 3Kx, 3Lx, 3Mx, 3Nx, 3Px, 3Qx, 3Rx, 3Ux, 3Wx, 41x, 45x, 48x, 4Fx, 4Mx, 65x, 66x, 67x, 68x, 69x, 6Ax, 6Bx, 6Cx, 72x, 73x, 74x, 7Sx, 7Tx, 82x, 83x, 84x, 85x, 86x | | | |
| | xxA, xxB, xxF, xxH, xxM, xxP, xxQ, xxU, xxV, xxY | 41W1297 | R | ** |
| | xxG | 41W1299 | R | ** |
| xxK | 41W1301 | R | ** | |
| xxE, xxJ | 41W1303 | R | ** | |

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Parts list

| No. | FRU | FRU no. | RoHS ID | CRU ID | |
|-----|--|---|---------|--------|---|
| 13 | Broadcom 802.11bg WLAN PCI-E Mini Card <ul style="list-style-type: none"> • 0689-A8x, A9x, AAx, ABx, B2x, BAx, C3x, C5x, CCx, CVx, D2x, E2x, E4x, EAx, G8x, GLx, GMx, GNx, GRx • 0768-A3x, A4x, A5x, A6x, ACx, ADx, B3x, B4x, B5x, BPx, C2x, CJx, CRx, CTx, CWx, DGx, DHx, DJx, EGx, EHx, EJx, EKx, ELx • 0769-AAx, ABx, ACx, CBx, CDx, CJx, CKx, CQx, CRx, G5x | | | | |
| | xxF, xxU, xxV | 42T0819 | R | ** | |
| | xxE, xxJ, xxT | 42T0821 | R | ** | |
| | xxA, xxB, xxG, xxH, xxK, xxL, xxM, xxP, xxQ, xxS, xxY | 42T0823 | R | ** | |
| | Lenovo 11a/b/g/n Wireless LAN Mini-PCI Express Adapter <ul style="list-style-type: none"> • 0689-A7x, B6x, CBx, CGx, CHx, CXx, CYx, D7x, DAx, DCx, E5x, F4x, F5x, G7x, GBx, GCx, GEx, GFx, GSx • 0768-A2x, AJx, BDx, BEx, BHx, C6x, C7x, C8x, C9x, CAx, CBx, CDx, CEx, CHx, CKx, CPx, CVx, CYx, DBx, Dfx, E2x, E7x, F9x, G7x, GAx, GBx, GCx, GEx, GMx, GVx • 0769-CVx, D6x, D7x, G3x | | | | |
| | xxA, xxB, xxF, xxH, xxL, xxM, xxP, xxQ, xxS, xxU | 42T0843 | R | ** | |
| | xxI, xxR (802.11 b/g/n) | 42T0851 | R | ** | |
| | Intel Wireless WiFi Link 4965AGN <ul style="list-style-type: none"> • 0769-A8x, A9x, B2x, B3x, B4x, C3x, C4x, CEx, CFx, CLx, CMx, CWx, CZx, D5x, G2x, G6x | | | | |
| | xxA, xxB, xxF, xxH, xxL, xxM, xxP, xxQ, xxS, xxU, xxV, xxY | 42T0865 | R | ** | |
| | xxG | 42T0867 | R | ** | |
| | xxE, xxJ | 42T0871 | R | ** | |
| | 14 | Hard disk drive slot cover for MT 0689 and 0768 | 41W5233 | R | * |
| | | Hard disk drive slot cover for MT 0769 | 41R7794 | R | * |
| 15 | 256-MB DDR2-667 SDRAM SO-DIMM (PC2-5300) card OP <ul style="list-style-type: none"> • 0689-2Mx, 2Rx, 39x, 3Fx, 3Lx, 3Mx, 6Px, 6Xx, 73x, 7Vx, 7Wx • 0768-2Ax, 37x, 38x, 3Px, 4Mx, 4Px, 4Qx, 4Rx, 6Ax, 78x, 79x, 7Gx, 82x, 83x | 40Y8401 | R | ** | |

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| No. | FRU | FRU no. | RoHS ID | CRU ID |
|-----|--|---------|---------|--------|
| 15 | 512-MB DDR2-667 SDRAM SO-DIMM (PC2-5300) card OP <ul style="list-style-type: none"> • 0689-22x, 24x, 25x, 26x, 27x, 28x, 29x, 2Ax, 2Bx, 2Ex, 2Fx, 2Hx, 2Jx, 2Kx, 2Lx, 2Nx, 2Px, 2Qx, 2Sx, 2Tx, 31x, 33x, 34x, 36x, 37x, 38x, 3Ax, 3Bx, 3Cx, 3Dx, 3Gx, 3Hx, 3Jx, 3Kx, 41x, 42x, 43x, 44x, 52x, 54x, 55x, 56x, 57x, 59x, 5Ax, 5Bx, 5Cx, 5Dx, 5Fx, 5Gx, 5Hx, 5Jx, 5Kx, 5Lx, 5Mx, 5Nx, 5Px, 65x, 66x, 67x, 68x, 69x, 6Ax, 6Bx, 6Cx, 6Dx, 6Ex, 6Fx, 6Hx, 6Jx, 6Kx, 6Lx, 6Mx, 6Nx, 6Qx, 6Rx, 6Sx, 6Tx, 6Ux, 6Vx, 6Wx, 6Yx, 6Zx, 72x, 75x, 76x, 77x, 7Mx, 7Nx, 7Px, 7Qx, 7Rx, 7Sx, 7Tx, 7Ux, 82x, 83x, 84x, 85x, 86x, K2x, A4x, A5x, A6x, A8x, A9x, AAx, ABx, ACx, ADx, AEx, AFx, AGx, AHx, AJx, B2x, B3x, B4x, B5x, B6x, B7x, B8x, B9x, BAx, BBx, BCx, BEx, C3x, C5x, C7x, C9x, CBx, CCx, CDx, CFx, CHx, CJx, CKx, CQx, CRx, CVx, CWx, Cx, D2x, D3x, D4x, D8x, D9x, Exx, Fxx, Gxx • 0768-21x, 22x, 25x, 26x, 27x, 28x, 2Cx, 31x, 33x, 34x, 35x, 36x, 3Bx, 3Cx, 3Dx, 3Ex, 3Fx, 3Gx, 3Hx, 3Jx, 3Kx, 3Lx, 3Mx, 3Nx, 3Qx, 3Rx, 3Sx, 3Tx, 3Ux, 3Vx, 3Wx, 3Yx, 41x, 45x, 46x, 47x, 48x, 49x, 4Ax, 4Bx, 4Cx, 4Dx, 4Ex, 4Fx, 4Gx, 4Hx, 4Jx, 4Kx, 4Lx, 4Sx, 52x, 53x, 54x, 55x, 56x, 57x, 58x, 59x, 5Ax, 5Cx, 5Dx, 5Ex, 5Fx, 5Gx, 5Hx, 5Jx, 5Kx, 5Lx, 5Nx, 5Px, 5Qx, 5Rx, 65x, 66x, 67x, 68x, 69x, 6Bx, 6Cx, 6Dx, 6Ex, 6Fx, 6Gx, 6Hx, 6Jx, 6Kx, 6Lx, 6Mx, 6Nx, 6Px, 6Qx, 6Rx, 6Sx, 6Tx, 6Ux, 6Vx, 6Wx, 6Xx, 6Yx, 6Zx, 72x, 73x, 74x, 75x, 76x, 77x, 7Ax, 7Bx, 7Cx, 7Dx, 7Ex, 7Fx, 7Hx, 7Jx, 7Kx, 7Lx, 7Mx, 7Nx, 7Px, 7Qx, 7Rx, 7Sx, 7Tx, 7Ux, 7Vx, 7Wx, 7Xx, 7Zx, 84x, 85x, 86x, CCx, K2x, A3x, A4x, A5x, A6x, A7x, A8x, A9x, AAx, ABx, ACx, ADx, AFx, AGx, AHx, B2x, B3x, B4x, B5x, B6x, B7x, B8x, B9x, BBx, BCx, BDx, BEx, BFx, BGx, BHx, BMx, BNx, BPx, BQx, BRx, BTx, C2x, C3x, C4x, C6x, C7x, C8x, C9x, CFx, CGx, CJx, CLx, CNx, CPx, CRx, CTx, CVx, CWx, Cx, D2x, D3x, D4x, D5x, D6x, D8x, DAx, DCx, Ddx, DEx, DGx, DHx, DJx, DKx, DLx, E5x, E6x, ECx, Efx, EKx, F2x, F3x, F4x, F6x, F7x, F9x, FBx, EGx, EHx, EJx, ELx, FGx, FHx, G2x, G3x, G5x, G6x, G8x, GAx, GFx, GGx, GHx, GJx, GKx, GLx, GMx, GNx, GPx, GQx, GRx, GSx, GTx, GUx, GVx, GWx • 0769-A7x, C3x, C4x, C5x, C6x, C7x, C8x, C9x, CAx, CBx, CDx, CEx, CFx, CGx, CHx, CJx, CKx, CLx, CMx, CNx, CPx, CQx, CRx, CYx, CZx, D2x, D3x, D6x, D7x, G4x, G5x | 40Y8402 | R | ** |

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Parts list

| No. | FRU | FRU no. | RoHS ID | CRU ID |
|-----|--|---------|---------|--------|
| 15 | 1-GB DDR2-667 SDRAM SO-DIMM (PC2-5300) card OP <ul style="list-style-type: none"> • 0689-6Gx, A7x, CGx, CLx, CMx, CNx, CPx, CYx, D5x, DBx, DCx • 0768-5Bx, 7Yx, A2x, AJx, BJx, BKx, BLx, BSx, CAx, CBx, CDx, CEx, CHx, CKx, CYx, DFx, E2x, E7x, FDx, FEx, FFx, FJx, G7x, GBx, GCx, GDx, GEx, GXx • 0769-A9x, B4x, D4x, D5x, G3x, G6x | 40Y8403 | R | ** |
| | 2-GB DDR2-667 SDRAM SO-DIMM (PC2-5300) card OP <ul style="list-style-type: none"> • 0769-G2x | 40Y8404 | R | ** |
| 16 | DIMM slot cover for MT 0689 and 0768 | 41W5227 | R | * |
| | DIMM slot cover for MT 0769 | 42W2824 | R | * |
| 17 | Thermal module slot cover | 41W5232 | R | * |
| 18 | Thermal module for MT 0689 and 0768 | 41W5226 | R | N |
| | CPU thermal module for MT 0769 | 41R7796 | R | N |
| 19 | Fan for 14W/15W, integrated <ul style="list-style-type: none"> • 0689-all • 0768-25x, 26x, 2Ax, 31x, 33x, 34x, 35x, 36x, 37x, 38x, 3Bx, 3Cx, 3Dx, 3Ex, 3Fx, 3Gx, 3Hx, 3Jx, 3Kx, 3Lx, 3Mx, 3Nx, 3Px, 3Qx, 3Rx, 3Sx, 3Tx, 3Ux, 3Vx, 3Wx, 41x, 45x, 47x, 48x, 49x, 4Ax, 4Bx, 4Cx, 4Dx, 4Jx, 4Kx, 4Mx, 4Px, 4Qx, 4Rx, 55x, 56x, 65x, 66x, 67x, 68x, 69x, 6Ax, 6Bx, 6Cx, 6Dx, 6Ex, 6Fx, 6Gx, 6Hx, 6Jx, 6Kx, 6Lx, 6Sx, 6Tx, 6Ux, 6Vx, 73x, 74x, 76x, 77x, 78x, 79x, 7Ax, 7Gx, 7Jx, 7Lx, 7Mx, 7Sx, 7Tx, 7Ux, 7Vx, 7Wx, 7Xx, 82x, 83x, 84x, 85x, 86x, K2x, ACx, ADx, AFx, B3x, B4x, B5x, B6x, B8x, B9x, BBx, BCx, BGx, BMx, BNx, BPx, BQx, BRx, BTx, C2x, C6x, C7x, C8x, C9x, CAx, CBx, CDx, CEx, CJx, CRx, CTx, CWx, D2x, D3x, D5x, D6x, DBx, DCx, DDx, DEx, DFx, DKx, DLx, E5x, E6x, EFx, EGx, EHx, EJx, EKx, ELx, F3x, F4x, F6x, F7x, FBx, FGx, FHx, G2x, G3x, GFx, GGx, GHx, GJx, GKx, GLx, GRx, GSx, GTx, GUx • 0769-A7x, AAx, ABx, C3x, C4x, C5x, C6x, C7x, C8x, C9x, CAx, CBx, CDx, CEx, CFx, CGx, CHx, CJx, CKx, CLx, CMx, CNx, CPx, CQx, CRx, CUx, CYx, D3x, D6x, D7x, G4x, G5x | 41W5225 | R | N |

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| No. | FRU | FRU no. | RoHS ID | CRU ID |
|-----|---|---------|---------|--------|
| 19 | Fan for MT 0768, discrete <ul style="list-style-type: none"> 0768-21x, 22x, 27x, 28x, 2Cx, 3Yx, 46x, 4Ex, 4Fx, 4Gx, 4Hx, 4Lx, 4Sx, 52x, 53x, 54x, 57x, 58x, 59x, 5Ax, 5Bx, 5Cx, 5Dx, 5Ex, 5Fx, 5Gx, 5Hx, 5Jx, 5Kx, 5Lx, 5Nx, 5Px, 5Qx, 5Rx, 6Mx, 6Nx, 6Px, 6Qx, 6Rx, 6Wx, 6Xx, 6Yx, 6Zx, 72x, 75x, 7Bx, 7Cx, 7Dx, 7Ex, 7Fx, 7Hx, 7Kx, 7Nx, 7Px, 7Qx, 7Rx, 7Yx, 7Zx, CCx, A2x, A3x, A4x, A5x, A6x, A7x, A8x, A9x, AAx, ABx, AGx, AHx, AJx, B2x, B7x, BDx, BEx, BFx, BHx, BJx, BKx, BLx, BSx, C3x, C4x, CFx, CGx, CHx, CKx, CLx, CNx, CPx, CVx, CXx, CYx, D4x, D8x, DAx, DGx, DHx, DJx, E2x, E7x, ECx, F2x, F9x, FDx, FEx, FFx, FJx, G5x, G6x, G7x, G8x, GAx, GBx, GCx, GDx, GEx, GMx, GNx, GPx, GQx, GVx, GWx, GXx | 41W5231 | R | N |
| | Fan for MT 0769, discrete <ul style="list-style-type: none"> 0769-A8x, A9x, ACx, ADx, B2x, B3x, B4x, CVx, CWx, CXx, CZx, D2x, D4x, D5x, G3x, G2x, G6x | 41R7795 | R | N |
| 20 | Battery pack, Li-ion (6 cell) <ul style="list-style-type: none"> 0689-all except 3Dx, CGx, CXx, CYx, DBx, DCx, G7x, GEx 0768-all except 4Px, 4Qx, 4Rx, 4Sx, 52x, 53x, 5Bx, 5Cx, 5Qx, 5Rx, 6Ax, 7Gx, ABx, CHx, CKx, CPx, CYx, G7x | | | |
| | Sanyo | 92P1184 | R | * |
| | Sony | 92P1186 | R | * |
| | Battery pack, Li-ion (6 cell) <ul style="list-style-type: none"> 0769-all except G2x | | | |
| | Sanyo | 42T4514 | R | * |
| | Panasonic | 42T5216 | R | * |
| | Battery pack, Li-ion (9 cell), Sanyo <ul style="list-style-type: none"> 0689-3Dx, CGx, CXx, CYx, DBx, DCx, G7x, GEx 0768-4Px, 4Qx, 4Rx, 4Sx, 52x, 53x, 5Bx, 5Cx, 5Qx, 5Rx, 6Ax, 7Gx, ABx, CHx, CKx, CPx, CXx, CYx, G7x | 92P1188 | R | * |
| | Battery pack, Li-ion (9 cell), Sanyo <ul style="list-style-type: none"> 0769-G2x | 42T4517 | R | * |
| 21 | Heat sink, integrated <ul style="list-style-type: none"> 0769-A7x, AAx, ABx, C3x, C4x, C5x, C6x, C7x, C8x, C9x, CAx, CBx, CDx, CEx, CFx, CGx, CHx, CJx, CKx, CLx, CMx, CNx, CPx, CQx, CRx, CUx, CYx, D3x, D6x, D7x, G4x, G5x | 41R7797 | R | N |
| | VGA thermal module, discrete <ul style="list-style-type: none"> 0769-A8x, A9x, ACx, ADx, B2x, B3x, B4x, CVx, CWx, CXx, CZx, D2x, D4x, D5x, G2x, G3x, G6x | 41R7798 | R | N |
| 22 | PC Card slot for MT 0689 and 0768 | 41W5224 | R | N |
| | ExpressCard slot for MT 0769 | 41R7789 | R | N |

(continued)

Parts list

| No. | FRU | FRU no. | RoHS ID | CRU ID |
|-----|---|---------|---------|--------|
| 23 | CPU assembly, Intel Celeron M processor 410 (1.46 GHz) <ul style="list-style-type: none"> • 0689-65x, 66x, 67x, 68x, 69x • 0768-65x, 66x, 67x, 68x, 82x | 41W5181 | R | N |
| | CPU assembly, Intel Celeron M processor 420 (1.6 GHz) <ul style="list-style-type: none"> • 0689-25x, 26x, 27x, 2Ex, 2Lx, 2Mx, 2Nx, 2Px, 2Rx, 31x, 36x, 37x, 39x, 3Gx, 3Hx, 3Jx, 3Kx, 3Lx, 57x, 59x, 72x, 73x, 86x, A8x, A9x, EAx • 0768-31x, 33x, 34x, 37x, 3Fx, 3Jx, 3Kx, 3Lx, 3Mx, 3Nx, 3Px, 3Qx, 3Rx, 3Vx, 41x, 45x, 47x, 48x, 4Fx, 4Mx, 4Px, 4Qx, 69x, 6Ax, A3x, A4x, ACx, ADx | 41W1202 | R | N |
| | CPU assembly, Intel Celeron M processor 430 (1.73 GHz) <ul style="list-style-type: none"> • 0689-75x, 76x, 77x, AAx, ABx, B2x, BAx, BPx, C3x, C5x, CCx, CVx, D2x, G8x, GLx, GMx • 0768-72x, 73x, 74x, A5x, A6x, B3x, B4x, B5x, BNx, BPx, C2x, CJx, CRx, CTx, DGx, DHx, DJx, EHx | 41W5183 | R | N |
| | CPU assembly, Intel Celeron M processor 540 (1.86 GHz) <ul style="list-style-type: none"> • 0769-CBx, CDx, CJx, CKx, CQx, CRx | 41R7621 | R | N |
| | CPU assembly, Intel Core Solo processor T1300 (1.66 GHz) <ul style="list-style-type: none"> • 0689-24x, 2Hx, 2Jx, 2Tx, 34x, 3Fx, 3Mx, 41x, 56x, 5Jx • 0768-2Ax, 38x, 3Dx, 3Ex, 3Tx, 3Ux, 3Wx, 4Cx, 4Dx, 4Rx | 41W1140 | R | N |
| | CPU assembly, Intel Core Solo processor T1350 (1.86 GHz) <ul style="list-style-type: none"> • 0689-84x • 0768-84x | 41W1459 | R | N |
| | CPU assembly, Intel Core Solo processor T1400 (1.83 GHz) <ul style="list-style-type: none"> • 0768-CWx | 41W1328 | R | N |

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| No. | FRU | FRU no. | RoHS ID | CRU ID |
|-----|--|---------|---------|--------|
| 23 | CPU assembly, Intel Core Duo processor T2050 (1.60 GHz) • 0689-85x • 0768-85x | 41W1461 | R | N |
| | CPU assembly, Intel Core Duo processor T2060 (1.60 GHz) • 0689-GGx, E2x, E4x • 0768-EGx, EJx, EKx, ELx, GFx, GHx, GJx, GKx, GRx, GSx, GTx | 42W7659 | R | N |
| | CPU assembly, Intel Core Duo processor T2250 (1.73 GHz) • 0689-GNx, GRx • 0768-BQx, BTx, FGx | 41W1463 | R | N |
| | CPU assembly, Intel Core Duo processor T2300 (1.66 GHz) • 0689-28x, 29x, 2Fx, 2Kx, 2Qx, 2Sx, 33x, 38x, 3Ax, 3Bx, 3Cx, 42x, 43x, 52x, 5Ax, 5Kx, 5Lx, K2x • 0768-21x, 22x, 25x, 26x, 27x, 28x, 35x, 36x, 3Bx, 3Cx, 3Gx, 3Hx, 3Sx, 3Yx, 49x, 4Ax, 4Ex, 4Gx, 4Hx, 4Jx, 4Kx, 55x, 56x, 57x, 58x, 5Gx, 5Hx, 5Kx, 5Nx, 5Px, K2x | 41W1132 | R | N |
| | CPU assembly, Intel Core Duo processor T2300E (1.66 GHz) • 0689-6Ax, 6Bx, 6Cx, 6Dx, 6Ex, 6Hx, 6Jx, 6Kx, 6Lx, 6Mx, 6Nx, 6Px, 6Qx, 6Rx, 6Sx, 6Tx, 6Ux, 6Vx, 6Wx, 6Xx, 6Yx, 6Zx, 7Mx, 7Nx, 7Px, 7Qx, 7Rx, 7Sx, 7Tx, 7Ux, 7Vx, 7Wx, 82x, 83x, CWx • 0768-6Bx, 6Cx, 6Dx, 6Ex, 6Fx, 6Gx, 6Hx, 6Jx, 6Kx, 6Lx, 6Mx, 6Px, 6Qx, 6Rx, 6Sx, 6Tx, 6Ux, 6Vx, 6Wx, 6Xx, 6Yx, 6Zx, 76x, 77x, 78x, 79x, 7Ax, 7Bx, 7Cx, 7Dx, 7Ex, 7Fx, 7Gx, 7Hx, 7Jx, 7Kx, 7Lx, 7Mx, 7Nx, 7Px, 7Qx, 7Rx, 7Sx, 7Tx, 7Ux, 7Vx, 7Wx, 7Xx, 7Zx, 83x, C3x | 41W1329 | R | N |
| | CPU assembly, Intel Core Duo processor T2350 (1.86 GHz) • 0689-GHx, E3x • 0768-E5x, E6x, EFx, GGx, GLx, GUx | 42W7660 | R | N |
| | CPU assembly, Intel Core Duo processor T2400 (1.83 GHz) • 0689-22x, 2Ax, 2Bx, 54x, 5Bx, 5Cx, 5Dx, 5Fx, 5Mx, 5Nx, 5Px, 6Fx, CHx • 0768-2Cx, 46x, 4Bx, 4Lx, 4Sx, 54x, 59x, 5Ax, 5Bx, 5Cx, 5Dx, 5Ex, 5Jx, 5Lx, 5Qx, 5Rx, CCx | 41W1134 | R | N |
| | CPU assembly, Intel Core Duo processor T2500 (2.0 GHz) • 0689-3Dx, 44x, 55x, 5Gx, 5Hx, 6Gx • 0768-52x, 53x, 5Fx, 6Nx, 75x, 7Yx | 41W1136 | R | N |

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Parts list

| No. | FRU | FRU no. | RoHS ID | CRU ID |
|-----|---|---------|---------|--------|
| 23 | CPU assembly, Intel Core 2 Duo processor T5200 (1.60 GHz) <ul style="list-style-type: none"> • 0689-BEx, F8x, G9x, GAx, GPx, GQx, GTx • 0768-BRx, BSx, FHx, FJx, GMx, GNx, GVx, GWx | 41W1465 | R | N |
| | CPU assembly, Intel Core 2 Duo processor T5500 (1.66 GHz) <ul style="list-style-type: none"> • 0689-A4x, A5x, A6x, ACx, AHx, B3x, B4x, B5x, B6x, B9x, BBx, C7x, C9x, CDx, CJx, CKx, CQx, CXx, D3x, D5x, D8x, D9x, F2x, F4x, GBx, GCx, GDx, GFx, GKx • 0768-A7x, AFx, AGx, AHx, B6x, B7x, B8x, B9x, BBx, BCx, BHx, BLx, BMx, BNx, C6x, C7x, C8x, C9x, CFx, CNx, D2x, D3x, D4x, D5x, D6x, D8x, DAx, DCx, DKx, DLx, F4x, F6x, F7x, FBx, FDx, G2x, G3x, G5x, G8x, GBx, GCx, GDx, GEx | 41W1409 | R | N |
| | CPU assembly, Intel Core 2 Duo processor T5600 (1.83 GHz) <ul style="list-style-type: none"> • 0689-ADx, AFx, AJx, B7x, B8x, BCx, CFx, CGx, CLx, CMx, CNx, CPx, CRx, CYx, D4x, DBx, DCx, F3x, F7x, G3x, G4x, G7x, GEx, GSx • 0768-A8x, AAx, B2x, BDx, BGx, BJx, BKx, C4x, CAx, CBx, CDx, CEx, CGx, CKx, CLx, CPx, CVx, CXx, DDx, DEx, ECx, F2x, F3x, FEx, FFx, G6x, G7x, GPx, GXx | 41W1410 | R | N |
| | CPU assembly, Intel Core 2 Duo processor T7100 (1.83 GHz) <ul style="list-style-type: none"> • 0769-A7x, AAx, ABx, ACx, B3x, C3x, C4x, C5x, C6x, C7x, C8x, C9x, CEx, CFx, CGx, CHx, CLx, CMx, CNx, CPx, CUx, CVx, CYx, D2x, D3x, D6x, D7x, G4x, G5x, | 42W7654 | R | N |
| | CPU assembly, Intel Core 2 Duo processor T7200 (2.0 GHz) <ul style="list-style-type: none"> • 0689-A7x, AEx, AGx, CBx, E5x, F5x, GUx • 0768-A2x, A9x, ABx, AJx, BEx, BFX, CHx, CYx, DFx, E2x, E7x, F9x, GAx, GQx | 41W1411 | R | N |
| | CPU assembly, Intel Core 2 Duo processor T7300 (2.0 GHz) <ul style="list-style-type: none"> • 0769-A8x, ADx, B2x, B4x, CAx, CWx, CXx, CZx, D4x, D5x, G3x, G6x | 42W7655 | R | N |
| | CPU assembly, Intel Core 2 Duo processor T7500 (2.2 GHz) <ul style="list-style-type: none"> • 0769-A9x, G2x | 42W7656 | R | N |

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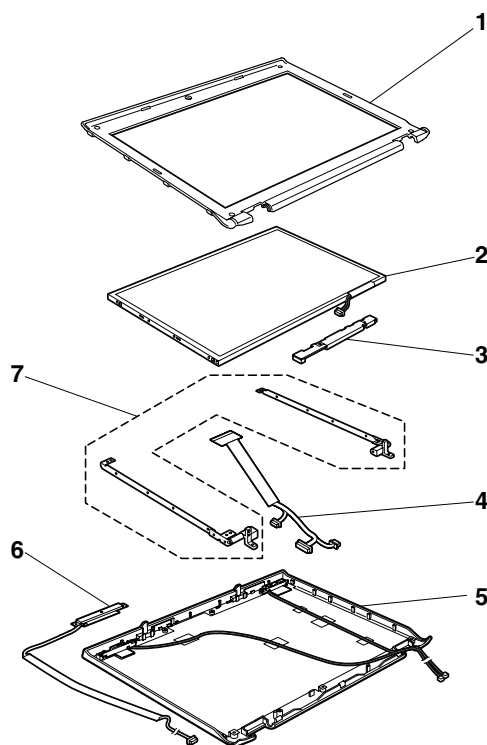
| No. | FRU | FRU no. | RoHS ID | CRU ID |
|-----|--|---------|---------|--------|
| 24 | <p><i>Bluetooth</i> daughter card (BDC)</p> <ul style="list-style-type: none"> • 0689-22x, 25x, 26x, 27x, 28x, 29x, 2Ax, 2Bx, 2Ex, 2Tx, 31x, 33x, 34x, 35x, 36x, 37x, 38x, 3Ax, 3Bx, 3Cx, 3Dx, 3Fx, 3Gx, 3Hx, 3Kx, 3Mx, 41x, 42x, 43x, 44x, 52x, 54x, 55x, 56x, 59x, 5Ax, 5Bx, 5Cx, 5Dx, 5Fx, 5Gx, 5Hx, 5Jx, 5Kx, 5Lx, 5Mx, 5Nx, 5Px, 65x, 66x, 6Ax, 6Dx, 6Ex, 6Fx, 6Gx, 6Hx, 6Jx, 6Kx, 6Lx, 6Mx, 6Nx, 6Px, 6Rx, 6Sx, 6Tx, 6Ux, 6Vx, 6Wx, 6Xx, 6Yx, 6Zx, 75x, 77x, 7Ux, 7Vx, 82x, 83x, 84x, 85x, 86x, A4x, A5x, A6x, A7x, AFx, AGx, AHx, AJx, B4x, B5x, B6x, B7x, B8x, B9x, BBx, BCx, BEx, C3x, C5x, C7x, C9x, CBx, CFx, CGx, CHx, CJx, CKx, CLx, CMx, CNx, CPx, CRx, CWx, CXx, CYx, D4x, D5x, D7x, D8x, D9x, DBx, DCx, E2x, E3x, E4x, E5x, F2x, F3x, F4x, F5x, F7x, F8x, G3x, G4x, G7x, G8x, G9x, GAx, GBx, GCx, GDx, GEx, GFx, GGx, GHx, GKx, GLx, GMx, GNx, GPx, GQx, GRx, GSx, GTx, GUx • 0768-21x, 22x, 25x, 26x, 27x, 28x, 2Ax, 2Cx, 31x, 33x, 34x, 35x, 36x, 38x, 3Bx, 3Cx, 3Dx, 3Ex, 3Fx, 3Gx, 3Hx, 3Vx, 3Yx, 41x, 46x, 47x, 48x, 49x, 4Ax, 4Bx, 4Cx, 4Dx, 4Ex, 4Fx, 4Gx, 4Hx, 4Jx, 4Kx, 4Lx, 4Rx, 4Sx, 52x, 53x, 54x, 55x, 56x, 57x, 58x, 59x, 5Ax, 5Bx, 5Cx, 5Dx, 5Ex, 5Fx, 5Gx, 5Hx, 5Jx, 5Kx, 5Lx, 5Nx, 5Px, 5Qx, 5Rx, 65x, 66x, 6Ex, 6Fx, 6Gx, 6Hx, 6Jx, 6Kx, 6Lx, 6Mx, 6Nx, 6Px, 6Qx, 6Rx, 6Sx, 6Tx, 6Ux, 6Vx, 6Wx, 6Xx, 6Yx, 6Zx, 72x, 74x, 75x, 76x, 78x, 79x, 7Ax, 7Bx, 7Cx, 7Dx, 7Ex, 7Fx, 7Gx, 7Hx, 7Jx, 7Mx, 7Nx, 7Px, 7Qx, 7Rx, 7Ux, 7Vx, 7Wx, 7Xx, 7Yx, 7Zx, 83x, 84x, 85x, 86x, CCx, K2x, A2x, AAx, ABx, ADx, AFx, AGx, AHx, AJx, B2x, B4x, B7x, B8x, B9x, BBx, BCx, BDx, BEx, BFx, BGx, BHx, BJx, BKx, BLx, BMx, BNx, BPx, BQx, BRx, BSx, BTx, C3x, C4x, C6x, C7x, C8x, C9x, CAx, CBx, CDx, CEx, CFx, CGx, CHx, CJx, CKx, CLx, CNx, CPx, CVx, CXx, CYx, D2x, D3x, D4x, D5x, D6x, D8x, DAx, DBx, DCx, DHx, DLx, E2x, E5x, E6x, E7x, Efx, EGx, EJx, EKx, ELx, F2x, F3x, F4x, F6x, F7x, F9x, FBx, Fdx, FEx, FFx, FGx, FHx, FJx, G2x, G3x, G5x, G6x, G7x, G8x, GAx, GBx, GCx, GDx, GEx, GFx, GGx, GHx, GJx, GKx, GLx, GMx, GNx, GPx, GQx, GRx, GSx, GTx, GUx, GVx, GWx, GXx • 0769-A8x, A9x, AAx, ABx, ACx, ADx, B2x, B3x, B4x, C3x, C4x, C8x, C9x, CAx, CEx, CFx, CLx, CMx, CNx, CPx, CQx, CRx, CUx, CVx, CWx, CXx, CYx, CZx, D2x, D3x, D4x, D5x, D6x, D7x, G2x, G3x, G4x, G6x | 41W1163 | R | N |

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Parts list

| No. | FRU | FRU no. | RoHS ID | CRU ID |
|-----|---|---------|---------|--------|
| — | Video card nVidia 64 MB • 0768-22x, 28x, 3Yx, 46x, 4Fx, 4Gx, 4Hx, 4Lx, 4Sx, 54x, 5Gx, 5Hx, 5Jx, 5Kx, 6Mx, 6Px, 6Wx, 6Xx, 6Yx, 6Zx, 72x, 7Kx, 7Zx, CCx, A3x, A4x, A5x, A6x, A7x, A8x, A9x, AAx, AGx, AHx, B7x, BDx, D4x, D8x, DAx, G8x | 41W1207 | R | N |
| — | Video card nVidia 128 MB for MT 0768 • 0768-21x, 27x, 2Cx, 4Ex, 52x, 53x, 57x, 58x, 59x, 5Ax, 5Bx, 5Cx, 5Dx, 5Ex, 5Fx, 5Lx, 5Nx, 5Px, 5Qx, 5Rx, 6Nx, 6Qx, 6Rx, 75x, 7Bx, 7Cx, 7Dx, 7Ex, 7Fx, 7Hx, 7Nx, 7Px, 7Qx, 7Rx, 7Yx, A2x, ABx, AJx, B2x, BEx, BFx, BHx, BJx, BKx, BLx, BSx, C3x, C4x, CFx, CGx, CHx, CKx, CLx, CNx, CPx, CVx, Cx, CYx, DGx, DHx, DJx, E2x, E7x, ECx, F2x, F9x, FDx, FEx, FFx, FJx, G5x, G6x, G7x, GAx, GBx, GCx, GDx, GEx, GMx, GNx, GPx, GQx, GVx, GWx, GXx | 41W1208 | R | N |
| — | Video card nVidia 128 MB for MT 0769 • 0769-ACx, CVx, CWx, Cx, D2x, D4x, D5x, G3x | 41R7696 | R | N |
| — | Video card nVidia 256 MB • 0769-A8x, A9x, ADx, B2x, B3x, B4x, CZx, G2x, G6x | 41R7697 | R | N |

LCD FRUs



14.1-in. WXGA TFT

| No. | FRU | FRU no. | RoHS ID | CRU ID |
|-----|--|---------|---------|--------|
| 1 | LCD front bezel, 14W without a camera • 0689-2xx, 3xx, 65x, 67x, 68x, 69x, 6Ax, 6Bx, 6Cx, 6Dx, 6Ex, 6Fx, 6Gx, 6Hx, 6Kx, 6Px, 6Qx, 6Rx, 6Sx, 6Xx, 6Yx, 6Zx, 73x, 7Mx, 7Nx, 7Px, 7Qx, 7Rx, 7Sx, 7Tx, 82x, 83x, 86x, K2x, A4x, A5x, A6x, A8x, A9x, AAx, ABx, ACx, ADx, AEx, B2x, B3x, B9x, BAx, CCx, CDx, CQx, E2x, E3x, E4x, E5x, EAx, GGx, GHx, GLx, GMx, GNx, GRx | 41W5209 | R | N |
| | LCD front bezel, 14W with a camera • 0689-4xx, 5xx, 66x, 6Jx, 6Lx, 6Mx, 6Nx, 6Tx, 6Ux, 6Vx, 6Wx, 72x, 75x, 76x, 77x, 7Ux, 7Vx, 7Wx, 84x, 85x, A7x, AFx, AGx, AHx, AJx, B4x, B5x, B6x, B7x, B8x, BBx, BCx, BEx, C3x, C5x, C7x, C9x, CBx, CFx, CGx, CHx, CJx, CKx, CLx, CMx, CNx, CPx, CRx, CVx, CWx, CXx, CYx, D2x, D3x, D4x, D5x, D8x, D9x, DBx, DCx, F2x, F3x, F4x, F5x, F7x, F8x, G3x, G4x, G7x, G8x, G9x, GAx, GBx, GCx, GDx, GEx, GFx, GKx, GPx, GQx, GSx, GTx, GUx | 41W5210 | R | N |

(continued)

Parts list

| No. | FRU | FRU no. | RoHS ID | CRU ID |
|-----|--|---------|---------|--------|
| 2 | LCD panel, 14.1-in. WXGA anti-glare <ul style="list-style-type: none"> 0689-31x, 33x, 37x, 38x, 39x, 3Ax, 3Bx, 3Cx, 3Dx, 3Fx, 3Jx, 3Lx, 3Mx, 41x, 42x, 43x, 44x, 52x, 5Jx, 67x, 68x, 69x, 6Ax, 6Hx, 6Jx, 6Lx, 6Mx, 6Px, 6Rx, 6Sx, 6Xx, 6Yx, 73x, 77x, 7Vx, 7Wx, 82x, 83x, 86x, A4x, B2x, B3x, B7x, B8x, CCx, CDx, CHx, CQx | | | |
| | Samsung | 13N7154 | R | N |
| | AUO | 13N7156 | R | N |
| | CMO | 13N7158 | R | N |
| | LPL | 42T0311 | R | N |
| | LCD panel, 14.1-in. WXGA glare <ul style="list-style-type: none"> 0689-22x, 24x, 25x, 26x, 27x, 28x, 29x, 2Ax, 2Bx, 2Ex, 2Fx, 2Hx, 2Jx, 2Kx, 2Lx, 2Mx, 2Nx, 2Px, 2Qx, 2Rx, 2Sx, 2Tx, 34x, 36x, 3Gx, 3Hx, 3Kx, 54x, 55x, 56x, 57x, 59x, 5Ax, 5Bx, 5Cx, 5Dx, 5Fx, 5Gx, 5Hx, 5Kx, 5Lx, 5Mx, 5Nx, 5Px, 65x, 66x, 6Bx, 6Cx, 6Dx, 6Ex, 6Fx, 6Gx, 6Kx, 6Nx, 6Qx, 6Tx, 6Ux, 6Vx, 6Wx, 6Zx, 72x, 75x, 76x, 7Mx, 7Nx, 7Px, 7Qx, 7Rx, 7Sx, 7Tx, 7Ux, 84x, 85x, K2x, A5x, A6x, A7x, A8x, A9x, AAx, ABx, ACx, ADx, AEx, AFx, AGx, AJx, AHx, B4x, B5x, B6x, B9x, BAx, BBx, BCx, BEx, C3x, C5x, C7x, C9x, CBx, CFx, CGx, CJx, CKx, CLx, CMx, CNx, CPx, CRx, CVx, CWx, CXx, CYx, D2x, D3x, D4x, D5x, D8x, D9x, DBx, DCx, Exx, Fxx, Gxx | | | |
| | Samsung | 13N7160 | R | N |
| | AUO | 13N7162 | R | N |
| | CMO | 13N7164 | R | N |
| | LPL | 42T0313 | R | N |
| 3 | Inverter card, 14W for MT 0689 | | | |
| | YEC | 41W1204 | R | N |
| | Sumida | 41W1317 | R | N |
| 4 | LCD cable assembly, 14W for MT 0689 | 91P7020 | R | N |
| 5 | LCD rear cover (A cover), 14W for MT 0689 | 41W5207 | R | N |
| 6 | Camera <ul style="list-style-type: none"> 0689-4xx, 5xx, 66x, 6Jx, 6Lx, 6Mx, 6Nx, 6Tx, 6Ux, 6Vx, 6Wx, 72x, 75x, 76x, 77x, 7Ux, 7Vx, 7Wx, 84x, 85x, A7x, AFx, AGx, AHx, AJx, B4x, B5x, B6x, B7x, B8x, BBx, BCx, BEx, C3x, C5x, C7x, C9x, CBx, CFx, CGx, CHx, CJx, CKx, CLx, CMx, CNx, CPx, CRx, CVx, CWx, CXx, CYx, D2x, D3x, D4x, D5x, D8x, D9x, DBx, DCx, F2x, F3x, F4x, F5x, F7x, F8x, G3x, G4x, G7x, G8x, G9x, GAx, GBx, GCx, GDx, GEx, GFx, GKx, GPx, GQx, GSx, GTx, GUx | | | |
| | Chicony | 39T7463 | R | N |
| | Lite-On | 39T7464 | R | N |
| 7 | Hinges, 14W for MT 0689 | 41W5213 | R | N |

15.4-in. WXGA TFT

| No. | FRU | FRU no. | RoHS ID | CRU ID |
|-----|--|---------|---------|--------|
| 1 | LCD front bezel for MT 0768, 15W without a camera • 0768-2xx, 3xx, 4Jx, 4Mx, 4Px, 4Rx, 65x, 67x, 68x, 6Bx, 6Cx, 6Dx, 6Ex, 6Fx, 6Gx, 6Hx, 6Jx, 6Mx, 6Sx, 6Tx, 77x, 78x, 79x, 7Gx, 7Mx, 82x, 83x, ACx, ADx, AFx, AGx, AHx, B3x, B4x, B6x, C2x, CJx, CWx, D2x, D5x, D6x, DGx, DJx, DKx, DLx, E6x, EFx, EKx, GFx, GGx, EGx, EHx, EJx, ELx, FGx, FHx, FJx, GHx, GJx, GKx, GLx, GRx, GSx, GTx, GUx, GWx, | 41W5211 | R | N |
| | LCD front bezel for MT 0769, 15W without a camera • 0769-A7x, AAx, ABx, C5x, C7x, C8x, C9x, CBx, CDx, CGx, CJx, CKx, CNx, CQx, CRx, CVx, G5x | 41R7783 | R | N |
| | LCD front bezel for MT 0768, 15W with a camera • 0768-41x, 45x, 46x, 47x, 48x, 49x, 4Ax, 4Bx, 4Cx, 4Dx, 4Ex, 4Fx, 4Gx, 4Hx, 4Kx, 4Lx, 4Qx, 4Sx, 66x, 69x, 6Ax, 6Ux, 6Vx, 6Wx, 6Zx, 72x, 73x, 74x, 76x, 7Ax, 7Bx, 7Hx, 84x, 85x, 86x, CCx, B5x, B7x, B8x, B9x, BBx, BCx, BDx, BGx, BLx, BMx, BNx, BPx, BQx, BRx, BSx, BTx, C3x, C4x, CFx, CGx, CLx, CNx, D3x, D4x, DBx, DCx, DDx, DEx, DHx, E5x, F3x, F4x, F6x, F7x, FBx, FDx, G5x, G6x, GXx | 41W5212 | R | N |
| | LCD front bezel for MT 0769, 15W with a camera • 0769-C6x, CAx, CHx, CPx, CUx, CWx, CYx, D2x, D4x, D5x, G4x | 41R7782 | R | N |
| 2 | LCD panel, 15.4-in. WXGA anti-glare • 0768-2Ax, 31x, 33x, 34x, 35x, 36x, 37x, 38x, 3Bx, 3Cx, 3Dx, 3Ex, 3Fx, 3Gx, 3Hx, 3Jx, 3Kx, 3Lx, 3Mx, 3Nx, 3Px, 3Qx, 3Rx, 3Sx, 3Tx, 3Ux, 3Vx, 3Wx, 3Yx, 41x, 45x, 46x, 47x, 48x, 49x, 4Ax, 4Bx, 4Cx, 4Dx, 4Ex, 4Fx, 4Gx, 4Hx, 4Jx, 4Kx, 4Lx, 4Mx, 4Px, 4Qx, 4Rx, 4Sx, 65x, 66x, 67x, 68x, 69x, 6Ax, 6Bx, 6Cx, 6Dx, 6Ex, 6Fx, 6Gx, 6Hx, 6Jx, 6Mx, 6Sx, 6Tx, 6Ux, 6Vx, 6Wx, 6Zx, 72x, 73x, 74x, 76x, 77x, 78x, 79x, 7Ax, 7Bx, 7Gx, 7Hx, 7Mx, 82x, 83x, 84x, 85x, 86x, CCx | | | |
| | Samsung | 13N7142 | R | N |
| | AUO | 13N7144 | R | N |
| | CMO | 13N7146 | R | N |
| | LCD panel, 15.4-in. WXGA glare • 0768-ACx, ADx, AFx, AGx, AHx, B3x, B4x, B5x, B6x, B7x, B8x, B9x, BBx, BCx, BDx, BGx, BLx, BMx, BNx, BPx, BQx, BRx, BSx, BTx, C2x, C3x, C4x, CFx, CGx, CJx, CLx, CNx, CWx, D2x, D3x, D4x, D5x, D6x, DBx, DCx, DDx, DEx, DGx, DHx, DJx, DKx, DLx, E5x, E6x, EFx, EGx, EHx, EJx, EKx, ELx, F3x, F4x, F6x, F7x, FBx, FDx, FGx, FHx, FJx, G5x, G6x, GFx, GGx, GHx, GJx, GKx, GLx, GRx, GSx, GTx, GUx, GWx, GXx • 0769-A7x, AAx, ABx, C5x, C6x, C7x, C8x, C9x, CAx, CBx, CDx, CGx, CHx, CJx, CKx, CNx, CPx, CQx, CRx, CUx, CVx, CWx, CYx, D2x, D4x, D5x, G4x, G5x | | | |
| | Samsung | 42T0315 | R | N |
| | AUO | 42T0317 | R | N |
| | CMO | 42T0321 | R | N |

(continued)

Parts list

| No. | FRU | FRU no. | RoHS ID | CRU ID |
|-----|--|---------|---------|--------|
| 2 | LCD panel, 15.4-in. WXGA glare, LPL • 0769-A7x, AAx, ABx, C5x, C6x, C7x, C8x, C9x, CAx, CBx, CDx, CGx, CHx, CJx, CKx, CNx, CPx, CQx, CRx, CUx, CVx, CWx, CYx, D2x, D4x, D5x, G4x, G5x | 42T0319 | R | N |
| 3 | Inverter card, 15W for MT 0768, YEC | 41W1318 | R | N |
| | Inverter card, 15W, Sumida • 0768-2Ax, 31x, 33x, 34x, 35x, 36x, 37x, 38x, 3Bx, 3Cx, 3Dx, 3Ex, 3Fx, 3Gx, 3Hx, 3Jx, 3Kx, 3Lx, 3Mx, 3Nx, 3Px, 3Qx, 3Rx, 3Sx, 3Tx, 3Ux, 3Vx, 3Wx, 3Yx, 41x, 45x, 46x, 47x, 48x, 49x, 4Ax, 4Bx, 4Cx, 4Dx, 4Ex, 4Fx, 4Gx, 4Hx, 4Jx, 4Kx, 4Lx, 4Mx, 4Px, 4Qx, 4Rx, 4Sx, 65x, 66x, 67x, 68x, 69x, 6Ax, 6Bx, 6Cx, 6Dx, 6Ex, 6Fx, 6Gx, 6Hx, 6Jx, 6Mx, 6Sx, 6Tx, 6Ux, 6Vx, 6Wx, 6Zx, 72x, 73x, 74x, 76x, 77x, 78x, 79x, 7Ax, 7Bx, 7Gx, 7Hx, 7Mx, 82x, 83x, 84x, 85x, 86x, CCx | 41W1319 | R | N |
| | Inverter card, 15W, Sumida • 0768-Axx, Bxx, Cxx, Dxx, Exx, Fxx, Gxx | 41W1393 | R | N |
| | Inverter card for MT 0769 | | | |
| | YEC | 41R7701 | R | N |
| | TDK | 41W1392 | R | N |
| 4 | LCD cable assembly, 15W, short for MT 0768 • 0768-2Ax, 31x, 33x, 34x, 35x, 36x, 37x, 38x, 3Bx, 3Cx, 3Dx, 3Ex, 3Fx, 3Gx, 3Hx, 3Jx, 3Kx, 3Lx, 3Mx, 3Nx, 3Px, 3Qx, 3Rx, 3Sx, 3Tx, 3Ux, 3Vx, 3Wx, 41x, 45x, 47x, 48x, 49x, 4Ax, 4Bx, 4Cx, 4Dx, 4Jx, 4Kx, 4Mx, 4Px, 4Qx, 4Rx, 65x, 66x, 67x, 68x, 69x, 6Ax, 6Bx, 6Cx, 6Dx, 6Ex, 6Fx, 6Gx, 6Hx, 6Jx, 6Sx, 6Tx, 6Ux, 6Vx, 73x, 74x, 76x, 77x, 78x, 79x, 7Ax, 7Gx, 7Mx, 82x, 83x, 84x, 85x, 86x, ACx, ADx, AFx, B3x, B4x, B5x, B6x, B8x, B9x, BBx, BCx, BGx, BMx, BNx, BPx, BQx, BRx, BTx, C2x, CJx, CWx, D2x, D3x, D5x, D6x, DBx, DCx, DDx, DEx, DLx, DKx, E5x, E6x, EFx, EGx, EHx, EJx, EKx, ELx, F3x, F4x, F6x, F7x, FBx, FGx, FHx, GFx, GGx, GHx, GJx, GKx, GLx, GRx, GSx, GTx, GUx | 91P7021 | R | N |
| | LCD cable assembly, 15W, long for MT 0768 • 0768-3Yx, 46x, 4Ex, 4Fx, 4Gx, 4Hx, 4Lx, 4Sx, 6Mx, 6Wx, 6Zx, 72x, 7Bx, 7Hx, CCx, AGx, AHx, B7x, BDx, BLx, BSx, C3x, C4x, CFx, CGx, CLx, CNx, D4x, DGx, DHx, DJx, Fdx, FJx, G5x, G6x, GWx, GXx | 91P7022 | R | N |
| | LCD cable assembly for MT 0769 | 41R7784 | R | N |
| | | | | |

(continued)

| No. | FRU | FRU no. | RoHS ID | CRU ID |
|-----|---|---------|---------|--------|
| 5 | LCD rear cover, 15W (A cover) • 0768-all except CCx | 41W5208 | R | N |
| | LCD rear cover, 15W (A cover) • 0768-CCx | 41W6669 | R | N |
| | LCD rear cover with three antennas • 0769-CWx, D5x | 41R7780 | R | N |
| | LCD rear cover with two antennas • 0769-A7x, AAx, ABx, C5x, C6x, C7x, C8x, C9x, CAx, CBx, CDx, CGx, CHx, CJx, CKx, CNx, CPx, CQx, CRx, CUx, CVx, CYx, D2x, D4x, G4x, G5x | 41R7781 | R | N |
| 6 | Camera for MT 0768 • 0768-41x, 45x, 46x, 46x, 47x, 48x, 49x, 4Ax, 4Bx, 4Cx, 4Dx, 4Ex, 4Fx, 4Gx, 4Hx, 4Kx, 4Lx, 4Qx, 4Sx, 66x, 69x, 6Ax, 6Ux, 6Vx, 6Wx, 6Zx, 72x, 73x, 74x, 76x, 7Ax, 7Bx, 7Hx, 84x, 85x, 86x, CCx, B5x, B7x, B8x, B9x, BBx, BCx, BDx, BGx, BLx, BMx, BNx, BPx, BQx, BRx, BSx, BTx, C3x, C4x, CFx, CGx, CLx, CNx, D3x, D4x, DBx, DCx, DDx, DEx, DHx, E5x, F3x, F4x, F6x, F7x, FBx, FDx, G5x, G6x, GXx | | | |
| | Chicony | 39T7463 | R | N |
| | Lite-On | 39T7464 | R | N |
| | Camera for MT 0769, Chicony • 0769-C6x, CAx, CHx, CPx, CUx, CWx, CYx, D2x, D4x, D5x, G4x | 41R7785 | R | N |
| 7 | Hinges, 15W | 41W5214 | R | N |

15.4-in. WSXGA+ TFT

| No. | FRU | FRU no. | RoHS ID | CRU ID |
|-----|---|---------|---------|--------|
| 1 | LCD front bezel for MT 0768, 15W (B cover) without a camera <ul style="list-style-type: none"> 0768-21x, 22x, 25x, 26x, 27x, 28x, 2Cx, 6Kx, 6Lx, 6Nx, 6Px, 6Qx, 6Rx, 7Kx, 7Lx, 7Sx, 7Tx, 7Yx, A3x, A4x, A5x, A6x, A7x, A8x, A9x, Dfx, GNx | 41W5211 | R | N |
| | LCD front bezel for MT 0768, 15W with a camera <ul style="list-style-type: none"> 0768-52x, 53x, 54x, 55x, 56x, 57x, 58x, 59x, 5Ax, 5Bx, 5Cx, 5Dx, 5Ex, 5Fx, 5Gx, 5Hx, 5Jx, 5Kx, 5Lx, 5Nx, 5Px, 5Qx, 5Rx, 6Xx, 6Yx, 75x, 7Cx, 7Dx, 7Ex, 7Fx, 7Jx, 7Nx, 7Px, 7Qx, 7Rx, 7Ux, 7Vx, 7Wx, 7Xx, 7Zx, K2x, A2x, AAx, ABx, AJx, B2x, BEx, Bfx, BHx, C6x, C7x, C8x, C9x, CAx, CBx, CDx, CEx, CHx, CKx, CPx, CRx, CTx, CVx, CXx, CYx, D8x, DAx, E2x, E7x, ECx, F2x, F9x, FEx, FFx, G2x, G3x, G7x, G8x, GAx, GBx, GCx, GDx, GEx, GMx, GVx, GPx, GQx 0769-A8x, A9x, ACx, ADx, B2x, B3x, C3x, C4x, CEx, CFx, CLx, CMx, CXx, CZx, D3x | 41W5212 | R | N |
| | LCD front bezel for MT 0769, 15W with a camera <ul style="list-style-type: none"> 0769-A8x, A9x, ACx, ADx, B2x, B3x, B4x, C3x, C4x, CEx, CFx, CLx, CMx, CXx, CZx, D3x, D6x, D7x, G2x, G3x, G6x | 41R7782 | R | N |
| 2 | LCD panel, 15.4-in. WSXGA+ Glare <ul style="list-style-type: none"> 0768-21x, 22x, 25x, 26x, 27x, 28x, 2Cx, 52x, 53x, 54x, 55x, 56x, 57x, 58x, 59x, 5Ax, 5Bx, 5Cx, 5Dx, 5Ex, 5Fx, 5Gx, 5Hx, 5Jx, 5Kx, 5Lx, 5Nx, 5Px, 5Qx, 5Rx, 6Kx, 6Lx, 6Nx, 6Px, 6Qx, 6Rx, 6Xx, 6Yx, 75x, 7Cx, 7Dx, 7Ex, 7Fx, 7Jx, 7Kx, 7Lx, 7Nx, 7Px, 7Qx, 7Rx, 7Sx, 7Tx, 7Ux, 7Vx, 7Wx, 7Xx, 7Yx, 7Zx, K2x, A2x, A3x, A4x, A5x, A6x, A7x, A8x, A9x, AAx, ABx, AJx, B2x, BEx, Bfx, BHx, BJx, BKx, C6x, C7x, C8x, C9x, CAx, CBx, CDx, CEx, CHx, CKx, CPx, CRx, CTx, CVx, CXx, CYx, D8x, DAx, Dfx, E2x, E7x, ECx, F2x, F9x, FEx, FFx, G2x, G3x, G7x, G8x, GAx, GBx, GCx, GDx, GEx, GMx, GNx, GPx, GQx, GVx 0769-A8x, A9x, ACx, ADx, B2x, B3x, B4x, C3x, C4x, CEx, CFx, CLx, CMx, CXx, CZx, D3x, D6x, D7x, G2x, G3x, G6x | | | |
| | LPL | 13N7150 | R | N |
| | CMO | 13N7152 | R | N |
| 3 | Inverter card for MT 0768, 15W, YEC | 41W1318 | R | N |
| | Inverter card, 15W, Sumida <ul style="list-style-type: none"> 0768-21x, 22x, 25x, 26x, 27x, 28x, 2Cx, 52x, 53x, 54x, 55x, 56x, 57x, 58x, 59x, 5Ax, 5Bx, 5Cx, 5Dx, 5Ex, 5Fx, 5Gx, 5Hx, 5Jx, 5Kx, 5Lx, 5Nx, 5Px, 5Qx, 5Rx, 6Kx, 6Lx, 6Nx, 6Px, 6Qx, 6Rx, 6Xx, 6Yx, 75x, 7Cx, 7Dx, 7Ex, 7Fx, 7Jx, 7Kx, 7Lx, 7Nx, 7Px, 7Qx, 7Rx, 7Sx, 7Tx, 7Ux, 7Vx, 7Wx, 7Xx, 7Yx, 7Zx, K2x | 41W1319 | R | N |

(continued)

| No. | FRU | FRU no. | RoHS ID | CRU ID |
|-----|--|---------|---------|--------|
| 3 | Inverter card, 15W, Sumida • 0768-A2x, A3x, A4x, A5x, A6x, A7x, A8x, A9x, AAx, ABx, AJx, B2x, BEx, BFx, BHx, BJx, BKx, C6x, C7x, C8x, C9x, CAx, CBx, CDx, CEx, CHx, CKx, CPx, CRx, CTx, CVx, CXx, CYx, D8x, DAx, DFx, E2x, E7x, ECx, F2x, F9x, G2x, G3x, G7x, G8x, GAx, GBx, GCx, GDx, GEx | 41W1393 | R | N |
| | Inverter card for MT 0769 | | | |
| | YEC | 41R7701 | R | N |
| | TDK | 41W1392 | R | N |
| | Sumida | 41R7702 | R | N |
| 4 | LCD cable assembly for MT 0768, 15W, short • 0768-25x, 26x, 55x, 56x, 6Kx, 6Lx, 7Jx, 7Lx, 7Sx, 7Tx, 7Ux, 7Vx, 7Wx, 7Xx, K2x, C6x, C7x, C8x, C9x, CAx, CBx, CDx, CEx, CRx, CTx, DFx, G2x, G3x | 91P7021 | R | N |
| | LCD cable assembly for MT 0768, 15W, long • 0768-21x, 22x, 27x, 28x, 2Cx, 52x, 53x, 54x, 57x, 58x, 59x, 5Ax, 5Bx, 5Cx, 5Dx, 5Ex, 5Fx, 5Gx, 5Hx, 5Jx, 5Kx, 5Lx, 5Nx, 5Px, 5Qx, 5Rx, 6Nx, 6Px, 6Qx, 6Rx, 6Xx, 6Yx, 75x, 7Cx, 7Dx, 7Ex, 7Fx, 7Kx, 7Nx, 7Px, 7Qx, 7Rx, 7Yx, 7Zx, A2x, A3x, A4x, A5x, A6x, A7x, A8x, A9x, AAx, ABx, AJx, B2x, BEx, BFx, BHx, BJx, BKx, CHx, CKx, CPx, CVx, CXx, CYx, D8x, DAx, E2x, E7x, ECx, F2x, F9x, G7x, G8x, GAx, GBx, GCx, GDx, GEx, FEx, FFx, GMx, GNx, GPx, GQx, GVx | 91P7022 | R | N |
| | LCD cable assembly for MT 0769 | 41R7784 | R | N |
| 5 | LCD rear cover, 15W (A cover) for MT 0768 | 41W5208 | R | N |
| | LCD rear cover with three antennas • 0769-A8x, A9x, B2x, B3x, B4x, C3x, C4x, CEx, CFx, CLx, CMx, CZx, G2x, G6x | 41R7780 | R | N |
| | LCD rear cover with two antennas • 0769-ACx, ADx, CXx, D3x, D6x, D7x, G3x | 41R7781 | R | N |
| 6 | Camera for MT 0768 • 0768-52x, 53x, 54x, 55x, 56x, 57x, 58x, 59x, 5Ax, 5Bx, 5Cx, 5Dx, 5Ex, 5Fx, 5Gx, 5Hx, 5Jx, 5Kx, 5Lx, 5Nx, 5Px, 5Qx, 5Rx, 6Xx, 6Yx, 75x, 7Cx, 7Dx, 7Ex, 7Fx, 7Jx, 7Nx, 7Px, 7Qx, 7Rx, 7Ux, 7Vx, 7Wx, 7Xx, 7Zx, K2x, A2x, AAx, ABx, AJx, B2x, BEx, BFx, BHx, BJx, BKx, C6x, C7x, C8x, C9x, CAx, CBx, CDx, CEx, CHx, CKx, CPx, CRx, CTx, CVx, CXx, CYx, D8x, DAx, E2x, E7x, ECx, F2x, F9x, FEx, FFx, G2x, G3x, G7x, G8x, GAx, GBx, GCx, GDx, GEx, GVx, GMx, GPx, GQx | | | |
| | Chicony | 39T7463 | R | N |
| | Lite-On | 39T7464 | R | N |
| | Camera for MT 0769, Chicony • 0769-A8x, A9x, ACx, ADx, B2x, B3x, B4x, C3x, C4x, CEx, CFx, CLx, CMx, CXx, CZx, D3x, D6x, D7x, G2x, G3x, G6x | 41R7785 | R | N |
| 7 | Hinges, 15W | 41W5214 | R | N |

Keyboard

Keyboard for MT 0689 and 0768

| Language | P/N (NMB) | P/N (Chicony) | RoHS ID | CRU ID |
|---|--------------|------------------|------------|-----------|
| Arabic | 39T7368 | 39T7432 | R | N |
| Belgian | 39T7365 | 39T7429 | | |
| Chinese, Traditional | 39T7379 | 39T7443 | | |
| Czech | 39T7373 | 39T7437 | | |
| Danish | 39T7362 | 39T7426 | | |
| Dutch | 39T7359 | 39T7423 | | |
| English, U.K. | 39T7357 | 39T7421 | | |
| English, U.S. | 39T7353 | 39T7417 | | |
| English, U.S. (International, with a Euro symbol) | 39T7383 | 39T7447 | | |
| Finnish, Swedish | 39T7360 | 39T7424 | | |
| French, Canadian (058) | 39T7355 | 39T7419 | | |
| French, Canadian, Acnor | 39T7354 | 39T7418 | | |
| French, European | 39T7358 | 39T7422 | | |
| German | 39T7356 | 39T7420 | | |
| Greek | 39T7375 | 39T7439 | | |
| Hebrew | 39T7370 | 39T7434 | | |
| Hungarian | 39T7374 | 39T7438 | | |
| Italian | 39T7363 | 39T7427 | | |
| Iceland | 42T3006 | — | | |
| Japanese | 39T7378 | 39T7442 | | |
| Korean | 39T7380 | 39T7444 | | |
| Norwegian | 39T7361 | 39T7425 | | |
| Polish | 39T7371 | 39T7435 | | |
| Portuguese | 39T7367 | 39T7431 | | |
| Portuguese, Brazilian | 39T7384 | 39T7448 | | |
| Russian | 39T7369 | 39T7433 | | |
| Slovak | 39T7377 | 39T7441 | | |
| Slovenian | 39T7376 | 39T7440 | | |
| Spanish, European | 39T7364 | 39T7428 | | |
| Spanish, Latin American | 39T7381 | 39T7445 | | |
| Swiss | 39T7366 | 39T7430 | | |
| Thai | 39T7382 | 39T7446 | | |
| Turkish | 39T7372 | 39T7436 | | |

Keyboard for MT 0769

| Language | P/N (NMB) | P/N (Chicony) | RoHS ID | CRU ID |
|---|--------------|------------------|------------|-----------|
| Arabic | 42T3353 | 42T3418 | R | N |
| Belgian | 42T3350 | 42T3415 | | |
| Chinese, Traditional | 42T3364 | 42T3429 | | |
| Czech | 42T3358 | 42T3423 | | |
| Danish | 42T3347 | 42T3412 | | |
| Dutch | 42T3344 | 42T3409 | | |
| English, U.K. | 42T3342 | 42T3407 | | |
| English, U.S. | 42T3338 | 42T3403 | | |
| English, U.S. (International, with a Euro symbol) | 42T3368 | 42T3433 | | |
| Finnish, Swedish | 42T3345 | 42T3410 | | |
| French, Canadian (058) | 42T3340 | 42T3405 | | |
| French, Canadian, Acnor | 42T3339 | 42T3404 | | |
| French, European | 42T3343 | 42T3408 | | |
| German | 42T3341 | 42T3406 | | |
| Greek | 42T3360 | 42T3425 | | |
| Hebrew | 42T3355 | 42T3420 | | |
| Hungarian | 42T3359 | 42T3424 | | |
| Iceland | 42T3370 | — | | |
| Italian | 42T3348 | 42T3413 | | |
| Japanese | 42T3363 | 42T3428 | | |
| Korean | 42T3365 | 42T3430 | | |
| Norwegian | 42T3346 | 42T3411 | | |
| Polish | 42T3356 | 42T3421 | | |
| Portuguese | 42T3352 | 42T3417 | | |
| Portuguese, Brazilian | 42T3369 | 42T3434 | | |
| Russian | 42T3354 | 42T3419 | | |
| Slovak | 42T3362 | 42T3427 | | |
| Slovenian | 42T3361 | 42T3426 | | |
| Spanish, European | 42T3349 | 42T3414 | | |
| Spanish, Latin American | 42T3366 | 42T3431 | | |
| Swiss | 42T3351 | 42T3416 | | |
| Thai | 42T3367 | 42T3432 | | |
| Turkish | 42T3357 | 42T3422 | | |

Recovery discs

Windows XP Professional CDs

Windows XP Professional is preinstalled as the operating system in the following models:

- 0689-22x, 26x, 27x, 29x, 2Bx, 2Jx, 2Px, 33x, 34x, 36x, 38x, 3Ax, 3Dx, 3Hx, 41x, 43x, 44x, 5Dx, 5Fx, 5Hx, 6Ax, 6Cx, 6Ex, 6Fx, 6Gx, 6Hx, 6Jx, 6Kx, 6Lx, 6Vx, 6Wx, 7Nx, 7Qx, 7Sx, 86x, K2x, A4x, A6x, A7x, A9x, ABx, ACx, ADx, AEx, AFx, AGx, AJx, B3x, B5x, B6x, B7x, B8x, B9x, BCx, C5x, C9x, CDx, CFx, CGx, CHx, CKx, CMx, CPx, CWx, CXx, CYx, D9x, DCx
- 0768-21x, 22x, 26x, 2Cx, 35x, 36x, 3Cx, 3Ex, 3Fx, 3Kx, 3Rx, 3Sx, 3Wx, 3Yx, 41x, 4Ax, 4Dx, 4Fx, 53x, 5Ax, 5Bx, 5Ex, 5Fx, 5Hx, 5Jx, 6Cx, 6Dx, 6Fx, 6Hx, 6Lx, 6Mx, 6Qx, 6Sx, 6Ux, 6Yx, 72x, 7Mx, 7Nx, 7Px, 7Qx, 7Rx, 7Tx, 7Vx, 7Xx, 7Yx, K2x, A4x, A6x, A7x, A8x, A9x, AAx, ABx, ADx, AFx, AGx, AHx, AJx, B2x, B6x, B8x, BEx, BFx, BHx, BKx, BMx, BRx, C3x, C4x, C7x, C9x, CBx, CEx, CFx, CGx, CHx, CKx, CTx, CVx, CWx, CYx, D3x, D5x, DAx, DEx, DFx, DGx, DHx, Efx, EKx

| Language | P/N | RoHS ID | CRU ID |
|---|---------|---------|--------|
| Arabic | 43T4265 | R | * |
| Chinese, Simplified | 43T4258 | | |
| Chinese, Traditional | 43T4259 | | |
| Chinese, Traditional (Hong Kong S.A.R.) | 43T4260 | | |
| Czech | 43T4264 | | |
| Danish | 43T4254 | | |
| Dutch | 43T4257 | | |
| English, (UD) U.K. with disabled modem and WLAN | 43T4247 | | |
| English, U.S., U.K. with enabled modem and WLAN | 43T4246 | | |
| Finnish | 43T4255 | | |
| French | 43T4248 | | |
| German | 43T4249 | | |
| Greek | 43T4269 | | |
| Hebrew, English enabled | 43T4262 | | |
| Hungarian | 43T4268 | | |
| Italian | 43T4251 | | |
| Japanese | 43T4261 | | |
| Korean | 43T4270 | | |
| Norwegian | 43T4256 | | |
| Polish | 43T4263 | | |
| Portuguese, Brazilian | 43T4252 | | |
| Russian | 43T4266 | | |
| Russian, English enabled | 43T4272 | | |
| Slovak | 43T4271 | | |
| Spanish | 43T4250 | | |
| Swedish | 43T4253 | | |
| Turkish | 43T4267 | | |

Windows XP Home Edition CDs

Windows XP Home Edition is preinstalled as the operating system in the following models:

- 0689-24x, 25x, 28x, 2Ax, 2Ex, 2Fx, 2Hx, 2Kx, 2Lx, 2Mx, 2Nx, 2Qx, 2Rx, 2Sx, 31x, 37x, 39x, 3Bx, 3Cx, 3Fx, 3Gx, 3Jx, 3Kx, 42x, 52x, 54x, 55x, 56x, 57x, 59x, 5Ax, 5Bx, 5Cx, 5Gx, 5Jx, 5Kx, 5Lx, 5Mx, 5Nx, 66x, 67x, 68x, 69x, 6Bx, 6Dx, 6Mx, 6Nx, 6Px, 6Qx, 6Rx, 6Sx, 6Tx, 6Ux, 72x, 75x, 76x, 77x, 7Mx, 7Px, 7Rx, 7Tx, 7Ux, 85x, A5x, A8x, AAx, AHx, B2x, B4x, BAx, BBx, BEx, C3x, C7x, CBx, CCx, CJx, CLx, CNx, CRx, CVx, D4x, D5x, D8x, DAx, DBx
- 0768-25x, 27x, 28x, 2Ax, 31x, 33x, 34x, 37x, 38x, 3Bx, 3Dx, 3Gx, 3Hx, 3Jx, 3Lx, 3Mx, 3Nx, 3Px, 3Qx, 3Tx, 3Ux, 3Vx, 45x, 46x, 47x, 48x, 49x, 4Bx, 4Cx, 4Ex, 4Gx, 4Hx, 4Jx, 4Kx, 4Lx, 4Mx, 52x, 54x, 55x, 56x, 57x, 58x, 59x, 5Cx, 5Dx, 5Gx, 5Kx, 5Lx, 5Nx, 5Px, 5Qx, 66x, 67x, 68x, 69x, 6Bx, 6Ex, 6Gx, 6Jx, 6Kx, 6Nx, 6Px, 6Rx, 6Tx, 6Vx, 6Wx, 6Xx, 6Zx, 73x, 74x, 75x, 76x, 77x, 78x, 79x, 7Ax, 7Bx, 7Cx, 7Dx, 7Ex, 7Fx, 7Jx, 7Kx, 7Lx, 7Sx, 7Ux, 7Wx, 7Zx, 85x, 86x, CCx, A2x, A3x, A5x, ACx, B3x, B5x, B7x, B9x, BBx, BCx, BDx, BGx, BJx, BLx, BPx, BQx, BSx, C2x, C6x, C8x, CAx, CDx, CJx, CLx, CNx, CPx, CRx, CXx, D6x, D8x, DBx, DCx, DDx, DJx, DKx, DLx

Parts list

| Language | P/N | RoHS ID | CRU ID |
|---|---------|---------|--------|
| Arabic | 43T4481 | R | * |
| Chinese, Simplified | 43T4474 | | |
| Chinese, Traditional | 43T4475 | | |
| Chinese, Traditional (Hong Kong S.A.R.) | 43T4476 | | |
| Czech | 43T4480 | | |
| Danish | 43T4470 | | |
| Dutch | 43T4473 | | |
| English, (UD) U.K. with disabled modem and WLAN | 43T4463 | | |
| English, U.S., U.K. with enabled modem and WLAN | 43T4462 | | |
| Finnish | 43T4471 | | |
| French | 43T4464 | | |
| German | 43T4465 | | |
| Greek | 43T4485 | | |
| Hebrew | 43T4488 | | |
| Hebrew, English enabled | 43T4478 | | |
| Hungarian | 43T4484 | | |
| Italian | 43T4467 | | |
| Japanese | 43T4477 | | |
| Korean | 43T4486 | | |
| Norwegian | 43T4472 | | |
| Polish | 43T4479 | | |
| Portuguese, Brazilian | 43T4468 | | |
| Russian | 43T4482 | | |
| Russian, English enabled | 43T4487 | | |
| Spanish | 43T4466 | | |
| Swedish | 43T4469 | | |
| Turkish | 43T4483 | | |

Windows Vista Home Premium (32 bit) DVDs for MT 0689 and 0768

Windows Vista Home Premium is preinstalled as the operating system in the following models:

- 0689-E3x, F5x, GAx, GBx, GCx, GDx, GFx, GHx, GKx
- 0768-E2x, E5x, ECx, EGx, EJx, F9x, GAx, GBx, GCx, GDx, GEx, GGx

| Language | P/N | RoHS ID | CRU ID |
|---|---------|---------|--------|
| Chinese, Simplified | 43T7686 | R | * |
| Chinese, Traditional | 43T7687 | | |
| Chinese, Traditional (Hong Kong S.A.R.) | 43T7688 | | |
| Czech | 43T7679 | | |
| Danish | 43T7677 | | |
| Dutch | 43T7678 | | |
| English, (UD) U.K. with disabled modem and WLAN | 43T7667 | | |
| English, U.S., U.K. with enabled modem and WLAN | 43T7666 | | |
| Finnish | 43T7680 | | |
| French | 43T7669 | | |
| German | 43T7670 | | |
| Greek | 43T7685 | | |
| Hebrew | 43T7690 | | |
| Hungarian | 43T7684 | | |
| Italian | 43T7673 | | |
| Japanese | 43T7674 | | |
| Korean | 43T7689 | | |
| Norwegian | 43T7675 | | |
| Polish | 43T7681 | | |
| Portuguese, Brazilian | 43T7672 | | |
| Russian | 43T7682 | | |
| Russian, English enabled | 43T7668 | | |
| Slovak | 43T7691 | | |
| Spanish | 43T7671 | | |
| Swedish | 43T7676 | | |
| Turkish | 43T7683 | | |

Windows Vista Home Premium (32 bit) DVDs for MT 0769

Windows Vista Home Premium is preinstalled as the operating system in the following models:

- 0769-AAx, ACx, ADx, B3x, C4x, C7x, C9x, CAx, CZx, D4x, D5x, G3x

| Language | P/N | RoHS ID | CRU ID |
|---|---------|---------|--------|
| Brazilian Portuguese | 44X9739 | R | * |
| Bulgarian | 44X9760 | | |
| Chinese, Traditional | 44X9754 | | |
| Chinese, Traditional (Hong Kong S.A.R.) | 44X9755 | | |
| Croatian | 44X9761 | | |
| Czech | 44X9746 | | |
| Danish | 44X9744 | | |
| Dutch | 44X9745 | | |
| English, (UD) U.K. with disabled modem and WLAN | 44X9735 | | |
| English, U.S., U.K. with enabled modem and WLAN | 44X9733 | | |
| Finnish | 44X9747 | | |
| French | 44X9736 | | |
| German | 44X9737 | | |
| Greek | 44X9752 | | |
| Hebrew | 44X9758 | | |
| Hungarian | 44X9751 | | |
| Italian | 44X9740 | | |
| Japanese | 44X9741 | | |
| Korean | 44X9756 | | |
| Norwegian | 44X9742 | | |
| Polish | 44X9748 | | |
| Portuguese | 44X9762 | | |
| Romanian | 44X9759 | | |
| Russian | 44X9749 | | |
| Russian, English enabled | 44X9734 | | |
| Serbian-Latin | 44X9763 | | |
| Slovak | 44X9765 | | |
| Slovinian | 44X9757 | | |
| Spanish | 44X9738 | | |
| Swedish | 44X9743 | | |
| Turkish | 44X9750 | | |
| Ukrainian | 44X9764 | | |

Windows Vista Home Basic (32 bit) DVDs for MT 0689 and 0768

Windows Vista Home Basic is preinstalled as the operating system in the following models:

- 0689-EAx, F2x, F3x, F8x, G3x, G8x, G9x, GGx, GLx, GTx, GUx
- 0768-EHx, F3x, F4x, F7x, FBx, FDx, FEx, FGx, FJx, G2x, G8x, GFx, GHx, GKx, GQx, GRx, GTx

| Language | P/N | RoHS ID | CRU ID |
|---|---------|---------|--------|
| Chinese, Simplified | 43T7634 | R | * |
| Chinese, Traditional | 43T7635 | | |
| Chinese, Traditional (Hong Kong S.A.R.) | 43T7636 | | |
| Czech | 43T7627 | | |
| Danish | 43T7625 | | |
| Dutch | 43T7626 | | |
| English, (UD) U.K. with disabled modem and WLAN | 43T7615 | | |
| English, U.S., U.K. with enabled modem and WLAN | 43T7614 | | |
| Finnish | 43T7628 | | |
| French | 43T7617 | | |
| German | 43T7618 | | |
| Greek | 43T7633 | | |
| Hebrew | 43T7638 | | |
| Hungarian | 43T7632 | | |
| Italian | 43T7621 | | |
| Japanese | 43T7622 | | |
| Korean | 43T7637 | | |
| Norwegian | 43T7623 | | |
| Polish | 43T7629 | | |
| Portuguese, Brazilian | 43T7620 | | |
| Russian | 43T7630 | | |
| Russian, English enabled | 43T7616 | | |
| Slovak | 43T7639 | | |
| Spanish | 43T7619 | | |
| Swedish | 43T7624 | | |
| Turkish | 43T7631 | | |

Windows Vista Home Basic (32 bit) DVDs for MT 0769

Windows Vista Home Basic is preinstalled as the operating system in the following models:

- 0769-C8x, CBx, CEx, CGx, CJx, CLx, CNx, CQx, CUx, CXx, CYx, D2x, D6x, G5x

| Language | P/N | RoHS ID | CRU ID |
|---|---------|---------|--------|
| Brazilian Portuguese | 44X9804 | R | * |
| Chinese, Traditional | 44X9819 | | |
| Chinese, Traditional (Hong Kong S.A.R.) | 44X9820 | | |
| Czech | 44X9811 | | |
| Danish | 44X9809 | | |
| Dutch | 44X9810 | | |
| English, (UD) U.K. with disabled modem and WLAN | 44X9800 | | |
| English, U.S., U.K. with enabled modem and WLAN | 44X9798 | | |
| Finnish | 44X9812 | | |
| French | 44X9801 | | |
| German | 44X9802 | | |
| Greek | 44X9817 | | |
| Hebrew | 44X9823 | | |
| Hungarian | 44X9816 | | |
| Italian | 44X9805 | | |
| Japanese | 44X9806 | | |
| Korean | 44X9821 | | |
| Norwegian | 44X9807 | | |
| Polish | 44X9813 | | |
| Russian | 44X9814 | | |
| Russian, English enabled | 44X9799 | | |
| Slovinian | 44X9822 | | |
| Spanish | 44X9803 | | |
| Swedish | 44X9808 | | |
| Turkish | 44X9815 | | |

Windows Vista Business (32 bit) DVDs for MT 0689 and 0768

Windows Vista Business is preinstalled as the operating system in the following models:

- 0689-E2x, E4x, E5x, F4x, F7x, G4x, G7x, GEx, GNx, GPx, GQx, GSx
- 0768-E6x, E7x, ELx, F2x, F6x, FFx, FHx, G3x, G5x, G6x, G7x, GJx, GLx, GMx, GNx, GPx, GSx, GUx, GVx, GWx, GXx

| Language | P/N | RoHS ID | CRU ID |
|---|---------|---------|--------|
| Arabic | 43T7575 | R | * |
| Chinese, Simplified | 43T7581 | | |
| Chinese, Traditional | 43T7582 | | |
| Chinese, Traditional (Hong Kong S.A.R.) | 43T7583 | | |
| Czech | 43T7573 | | |
| Danish | 43T7571 | | |
| Dutch | 43T7572 | | |
| English, (UD) U.K. with disabled modem and WLAN | 43T7561 | | |
| English, U.S., U.K. with enabled modem and WLAN | 43T7560 | | |
| Finnish | 43T7574 | | |
| French | 43T7563 | | |
| German | 43T7564 | | |
| Greek | 43T7580 | | |
| Hungarian | 43T7579 | | |
| Italian | 43T7567 | | |
| Japanese | 43T7568 | | |
| Korean | 43T7584 | | |
| Norwegian | 43T7569 | | |
| Polish | 43T7576 | | |
| Portuguese, Brazilian | 43T7566 | | |
| Russian | 43T7577 | | |
| Russian, English enabled | 43T7562 | | |
| Slovak | 43T7586 | | |
| Spanish | 43T7565 | | |
| Swedish | 43T7570 | | |
| Turkish | 43T7578 | | |

Windows Vista Business (32 bit) DVDs for MT 0769

Windows Vista Business is preinstalled as the operating system in the following models:

- 0769-A7x, A8x, ABx, B2x, C3x, C5x, C6x, CDx, CFx, CHx, CKx, CMx, CPx, CRx, CVx, CWx, D3x, D7x, G6x

| Language | P/N | RoHS ID | CRU ID |
|---|---------|---------|--------|
| Brazilian Portuguese | 44X9772 | R | * |
| Bulgarian | 44X9792 | | |
| Chinese, Traditional | 44X9787 | | |
| Chinese, Traditional (Hong Kong S.A.R.) | 44X9788 | | |
| Croatian | 44X9793 | | |
| Czech | 44X9779 | | |
| Danish | 44X9777 | | |
| Dutch | 44X9778 | | |
| English, (UD) U.K. with disabled modem and WLAN | 44X9768 | | |
| English, U.S., U.K. with enabled modem and WLAN | 44X9766 | | |
| Finnish | 44X9780 | | |
| French | 44X9769 | | |
| German | 44X9770 | | |
| Greek | 44X9785 | | |
| Hungarian | 44X9784 | | |
| Italian | 44X9773 | | |
| Japanese | 44X9774 | | |
| Korean | 44X9789 | | |
| Norwegian | 44X9775 | | |
| Polish | 44X9781 | | |
| Portuguese | 44X9794 | | |
| Romanian | 44X9791 | | |
| Russian | 44X9782 | | |
| Russian, English enabled | 44X9767 | | |
| Serbian-Latin | 44X9795 | | |
| Slovak | 44X9797 | | |
| Slovinian | 44X9790 | | |
| Spanish | 44X9771 | | |
| Swedish | 44X9776 | | |
| Turkish | 44X9783 | | |
| Ukrainian | 44X9796 | | |

Windows Vista Business (64 bit) DVDs

Windows Vista Business is preinstalled as the operating system in the following models:

- 0769-G4x

| Language | P/N | RoHS ID | CRU ID |
|---|---------|---------|--------|
| Brazilian Portuguese | 44X9855 | R | * |
| Chinese, Traditional | 44X9870 | | |
| Chinese, Traditional (Hong Kong S.A.R.) | 44X9871 | | |
| Czech | 44X9862 | | |
| Danish | 44X9860 | | |
| Dutch | 44X9861 | | |
| English, (UD) U.K. with disabled modem and WLAN | 44X9851 | | |
| English, U.S., U.K. with enabled modem and WLAN | 44X9849 | | |
| Finnish | 44X9863 | | |
| French | 44X9852 | | |
| German | 44X9853 | | |
| Greek | 44X9868 | | |
| Hungarian | 44X9867 | | |
| Italian | 44X9856 | | |
| Japanese | 44X9857 | | |
| Korean | 44X9872 | | |
| Norwegian | 44X9858 | | |
| Polish | 44X9864 | | |
| Russian | 44X9865 | | |
| Russian, English enabled | 44X9850 | | |
| Slovinian | 44X9873 | | |
| Spanish | 44X9854 | | |
| Swedish | 44X9859 | | |
| Turkish | 44X9866 | | |

Windows Vista Ultimate (32 bit) DVDs

Windows Vista Ultimate is preinstalled as the operating system in the following models:

- 0769-A9x, B4x, G2x

| Language | P/N | RoHS ID | CRU ID |
|---|---------|---------|--------|
| Brazilian Portuguese | 44X9830 | R | * |
| Chinese, Traditional | 44X9845 | | |
| Chinese, Traditional (Hong Kong S.A.R.) | 44X9846 | | |
| Czech | 44X9837 | | |
| Danish | 44X9835 | | |
| Dutch | 44X9836 | | |
| English, (UD) U.K. with disabled modem and WLAN | 44X9826 | | |
| English, U.S., U.K. with enabled modem and WLAN | 44X9824 | | |
| Finnish | 44X9838 | | |
| French | 44X9827 | | |
| German | 44X9828 | | |
| Greek | 44X9843 | | |
| Hungarian | 44X9842 | | |
| Italian | 44X9831 | | |
| Japanese | 44X9832 | | |
| Korean | 44X9847 | | |
| Norwegian | 44X9833 | | |
| Polish | 44X9839 | | |
| Russian | 44X9840 | | |
| Russian, English enabled | 44X9825 | | |
| Slovinian | 44X9848 | | |
| Spanish | 44X9829 | | |
| Swedish | 44X9834 | | |
| Turkish | 44X9841 | | |

Corel software CDs

| Language | P/N | RoHS ID | CRU ID |
|-----------------------|---------|---------|--------|
| English, U.S. | 41X0440 | R | * |
| French | 41X0443 | | |
| Japanese | 41X0608 | | |
| Portuguese, Brazilian | 41X0449 | | |
| Spanish | 41X0446 | | |

AC adapters

| FRU | P/N | RoHS ID | CRU ID |
|---|---------|---------|--------|
| 2-pin (90 W, 20 V) adapter (models xxE, xxF, xxJ, xxL, xxP, xxS, xxU, xxY) OP | | | |
| ASTEC for MT 0689 and 0768 | 92P1106 | R | * |
| ASTEC for MT 0769 | 42T5000 | R | * |
| Lite-On for MT 0689 and 0768 | 92P1110 | R | * |
| Lite-On for MT 0769 | 93P5026 | R | * |
| Sanken | 92P1114 | R | * |
| 2-pin (65 W, 20 V) adapter (models xxE, xxF, xxJ, xxL, xxP, xxS, xxU, xxY) OP | | | |
| Delta | 92P1155 | R | * |
| Lite-On | 92P1159 | R | * |
| ASTEC | 92P1214 | R | * |
| 3-pin (90 W, 20 V) adapter (models xxA, xxB, xxC, xxG, xxH, xxK, xxM, xxT, xxQ, xxR, xxV) OP | | | |
| ASTEC | 92P1104 | R | * |
| Lite-On | 92P1108 | R | * |
| Sanken | 92P1112 | R | * |
| 3-pin (65W, 20 V) adapter (models xxA, xxB, xxC, xxG, xxH, xxK, xxM, xxT, xxQ, xxR, xxV) OP | | | |
| Delta | 92P1153 | R | * |
| Lite-On | 92P1157 | R | * |
| ASTEC | 92P1212 | R | * |

Power cords

Power cords for MT 0689 and 0768

A Lenovo 3000 power cord for a specific country or region is usually available only in that country or region:

For 2-pin power cords:

| Region | P/N | RoHS ID | CRU ID |
|--|---------|---------|--------|
| Canada, U.S. (models xxF, xxL, xxS, xxU) | 39M5016 | R | * |
| Japan (models Exx, Jxx) | 39M5040 | | |
| Argentina (models CTO, xxY) | 39M5020 | | |
| Brazil (models CTO, xxP) | 39M5056 | | |

For 3-pin power cords:

| Region | P/N | RoHS ID | CRU ID |
|--|---------|---------|--------|
| Australia, New Zealand (models xxM) | 39M4960 | R | * |
| Taiwan, Thailand (models xxG, xxV) | 39M4955 | | |
| Italy (models xxG) | 39M4984 | | |
| Denmark (models xxG) | 39M4968 | | |
| U.K., China (Hong Kong S.A.R.) (models xxB, xxG, xxH) | 39M4976 | | |
| European countries (models xxG) | 39M4964 | | |
| India (models xxQ) | 39M5004 | | |
| India, South Africa (models xxG) | 39M4972 | | |
| Israel (models xxG) | 39M4988 | | |
| Korea (models xxK) | 39M5000 | | |
| China (P.R.C.) (other than Hong Kong S.A.R.) (models CTP, xxC) | 39M4996 | | |
| Switzerland (models xxG) | 39M4980 | | |

Power cords for MT 0769

A Lenovo 3000 power cord for a specific country or region is usually available only in that country or region:

For 2-pin power cords:

| Region | P/N (Longwell) | P/N (Volex) | RoHS ID | CRU ID |
|--------------|----------------|-------------|---------|--------|
| Argentina | 42T5020 | 42T5105 | R | * |
| Brazil | 42T5026 | 42T5111 | | |
| Canada, U.S. | 42T5008 | 42T5093 | | |
| Japan | 42T5014 | 42T5099 | | |

For 3-pin power cords:

| Region | P/N (Longwell) | P/N (Volex) | RoHS ID | CRU ID |
|---------------------------------|----------------|-------------|---------|--------|
| Australia, New Zealand | 42T5050 | 42T5135 | R | * |
| Denmark | 42T5041 | 42T5126 | | |
| Europe | 42T5029 | 42T5114 | | |
| Hong Kong S.A.R. of China, U.K. | 42T5035 | 42T5120 | | |
| India | 42T5083 | 42T5168 | | |
| Israel | 42T5062 | 42T5147 | | |
| Italy | 42T5047 | 42T5132 | | |
| Korea | 42T5077 | 42T5162 | | |
| South Africa | 42T5056 | 42T5141 | | |
| Switzerland | 42T5044 | 42T5129 | | |
| Thailand, Taiwan | 42T5004 | 42T5089 | | |

Miscellaneous parts

| FRU | P/N | RoHS ID | CRU ID |
|---|---------|---------|--------|
| Screw kit for MT 0689 (including nylon-coated screws): <ul style="list-style-type: none"> • M2 × 3 mm (silver), flat head (9) • M2 × 4 mm (black), flat head (6) • M2 × 5 mm (silver), flat head (10) • M2.5 × 3 mm (black), flat head (18) • M2.5 × 4 mm (silver), flat head (10) • M2.5 × 5 mm (black), flat head (7) • M2.5 × 8 mm (silver), flat head (21) • M3 × 3 mm (black), flat head (2) • Hex stud (2) | 41W5229 | R | N |
| Screw kit for MT 0768 (including nylon-coated screws): <ul style="list-style-type: none"> • M2 × 3 mm (silver), flat head (14) • M2 × 4 mm (black), flat head (6) • M2 × 5 mm (black), flat head (10) • M2.5 × 3 mm (black), flat head (14) • M2.5 × 4 mm (silver), flat head (16) • M2.5 × 6 mm (silver), flat head (21) • M2.5 × 8 mm (silver), flat head (18) • M3 × 3 mm (silver), flat head (4) • CPU thermal screw (silver) (4) • Hex stud (2) | 41W5230 | R | N |
| Screw kit for MT 0769 (including nylon-coated screws): <ul style="list-style-type: none"> • M2 × 3 mm (silver), pan head (15) • M2 × 4 mm (black), pan head (2) • M2 × 5 mm (black), pan head (6) • M2.5 × 3 mm (black), pan head (12) • M2.5 × 4 mm (silver), pan head (17) • M2.5 × 6 mm (silver), pan head (21) • M2.5 × 8 mm (silver), pan head (17) • M2.5 × 10 mm (silver), pan head (1) • M3 × 3 mm (black), pan head (4) • VGA thermal screw (silver) (4) • Hex stud (2) | 41R7808 | R | N |
| Bottom miscellaneous parts for MT 0689 and 0768 : <ul style="list-style-type: none"> • RJ11 cable • <i>Bluetooth</i> cable • USB cable, 14W • USB cable, 15W • TV-out cable, 14W • TV-out cable, 15W • DC-in cable • Rubber foot, front (2) • Rubber foot, rear (2) • Thermal tunnel, non-VGA • Thermal tunnel, VGA • USB gasket • Audio gasket | 41W5228 | R | N |

| FRU | P/N | RoHS ID | CRU ID |
|--|---------|---------|--------|
| Bottom miscellaneous parts for MT 0769: <ul style="list-style-type: none"> • RJ11 cable • <i>Bluetooth</i> cable • USB cable • TV-out cable • Speakers • USB EMI tape • Blank bezel for ExpressCard slot • Rubber foot, front (2) • Rubber foot, rear (2) | 41R7793 | R | N |
| LCD miscellaneous parts for MT 0689: <ul style="list-style-type: none"> • LCD rubber, upper (4) • LCD rubber, middle (2) • LCD rubber, lower (2) • LCD latch hook L • LCD latch hook R • LCD spring • LCD knob • LCD latch wire • Camera cable | 41W5215 | R | N |
| LCD miscellaneous parts for MT 0768: <ul style="list-style-type: none"> • LCD rubber, upper (4) • LCD rubber, middle (2) • LCD rubber, lower (2) • LCD hook • LCD spring • LCD knob • Camera cable | 41W5216 | R | N |
| LCD miscellaneous parts for MT 0769: <ul style="list-style-type: none"> • LCD rubber, upper (4) • LCD rubber, middle (2) • LCD rubber, lower (2) • LCD hook • LCD spring • LCD knob • Camera cable | 41R7786 | R | N |

Common parts list

Tools

| Tool | P/N |
|--|---------|
| Triconnector wrap plug | 72X8546 |
| Audio wrap cable | 66G5180 |
| USB parallel test cable | 05K2580 |
| Screwdriver kit | 95F3598 |
| Mini PC tool set | 00P7033 |
| 1/4" drive spinner handle | 1650840 |
| 1/4" Sq. to 1/4" hex torx adapter | 93F2838 |
| TR7-TR-10 tamper resistant torx bits | 00P6967 |
| Removal tool antenna RF connector | 08K7159 |
| PCI-Express/USB wrap card | 27K9813 |
| CE Utility Diskette for Lenovo 3000 notebooks Note: Download the file from the following Web site: http://www.lenovo.com/spm | — |

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