lenovo

Lenovo Z410/Z510/ Z510 Touch

Hardware Maintenance Manual

Notes:

- Before using this information and the product it supports, be sure to read the general information under “Notices” on page 109.
- This manual applies to the following models: Lenovo Z410/Z510/Z510 Touch. The illustrations used in this manual are for Lenovo Z510 unless otherwise stated.

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About this manual

This manual contains service and reference information for the following Lenovo product:

Lenovo Z410/Z510/Z510 Touch

Use this manual to troubleshoot problems.

The manual is divided into the following sections:

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

Important:

This manual is intended only for trained servicers who are familiar with Lenovo products. Use this manual to troubleshoot problems effectively.

Before servicing a Lenovo product, make sure to read all the information under “Safety information” on page 1 and “Important service information” on page 16.

Safety information

This chapter presents the following safety information that you need to get familiar with before you service an Lenovo Z410/Z510/Z510 Touch computer:

- "General safety" on page 2
- "Electrical safety" on page 3
- "Safety inspection guide" on page 5
- "Handling devices that are sensitive to electrostatic discharge" on page 6
- "Grounding requirements" on page 6
- "Safety notices: multilingual translations" on page 7
- "Laser compliance statement" on page 14

General safety

Follow these rules below to ensure general safety:

- Observe a good housekeeping in the area where the machines are put during and after the 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 it.
  4. Lift it by standing or pushing up with your leg muscles; this action could avoid 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 machine unsafe.
- Before you start the machine, make sure that other service representatives and the customer are not in a hazardous position.
- Place removed covers and other parts in a safe place, keeping them away from all personnel, while you are servicing the machine.
- Keep your toolcase away from walk areas so that other people will not trip it over.
- Do not wear loose clothing that can be trapped in the moving parts of the 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 the 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 may 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 the 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 equipments.

Important:

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

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

- Find the room emergency power-off (EPO) switch, disconnecting the 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 the 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. Be extremely careful when you measure the 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 it to make sure 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:
  - Caution: do not become a victim yourself.
  - Switch off the power.
  - Send the victim to get medical aid.

Safety inspection guide

The purpose of this inspection guide is to assist you in identifying potential 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 according to the attachment of non-Lenovo 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 potential 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. Turn 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. Check for cracked or bulging batteries.
5. Remove the cover.
6. Check for any obvious non-Lenovo alterations. Use good judgment as to the safety of any non-Lenovo alterations.
7. 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.
8. Check for worn, frayed, or pinched cables.
9. 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.

Safety notices: multilingual translations

The safety notices in this section are provided in English, French, German, Hebrew, Italian, Japanese, 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.

FRU の交換後、コンピュータの電源を入れる前に、ねじ、バネ、その他の小さな部品がすべて正しい位置にあり、またコンピュータの内部で緩んでいないことを確認してください。
これを確認するには、コンピュータを振って、カチャカチャと音がしないか確かめます。金属部品や金属破片はショートの原因になることがあります。

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

⚠ DANGER

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 nicht zerlegt, wiederaufgeladen, kurzgeschlossen, oder Feuer oder Wasser ausgesetzt werden. 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 כמות קטנה
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.

予備バッテリーの中には少量のニッケルとカドミウムが含まれているものがあります。したがって、予備バッテリーの分解、再充電、火または水の中への投棄、またはショートさせることは決して行わないでください。バッテリーを廃棄する場合は地方自治体の条例に従ってください。適切なパーツ・リストにあるバッテリーだけを使用してください。誤ったバッテリーを使用すると、バッテリーが発火したり、爆発したりすることがあります。

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

⚠ DANGER

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 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.

バッテリー・パックには少量のニッケルが含まれています。バッテリー・パックを分解したり、火または水の中に投げ込んだり、ショートさせないでください。バッテリー・パックの廃棄にあたっては、地方自治体の条例または規則に従ってください。バッテリー・パックを交換するときは、適切なパーツ・リストにあるバッテリーだけを使用してください。誤ったバッテリーを使用すると、バッテリーが発火したり、爆発したりすることがあります。

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

⚠ DANGER

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 temperature 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 Systembatterie ist eine Lithiumbatterie. 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 כנדרש
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.

リチウム・バッテリーは、火災、爆発、または重症のやけどを引き起こすことがあります。バックアップ・バッテリーの充電、その極性コネクターの取り外し、バッテリー本体の分解、
100 ℃ (212 ˚F) 以上への加熱、焼却、電池の中身を水に浸すことはしないでください。バッテリーを廃棄する場合は地方自治体の条例に従ってください。適切なパーツ・リストにあるバッテリーだけを使用してください。誤ったバッテリーを使用すると、バッテリーが発火したり、爆発したりすることがあります。

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 at least for 15 minutes. Seek medical care if any symptoms caused by 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.

LCD が破損し、 LCD の中の液体が目に入ったり、手に触れたりした場合は、液体が触れた部分を少なくとも 15 分間洗い流してください。洗い流した後に、液体によって何らかの症状が現れた場合は、医師の治療を受けてください。

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

⚠ DANGER

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.

感電を防ぐため、インバーター・カードの下部を保護しているプラスチック・カバーを外さないでください。

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

Safety notice 7

⚠ DANGER

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.

メイン・バッテリーの電圧は低くても、ショートしたり、接地したバッテリーが、作業者にやけどを負わせたり、可燃物を燃やすだけの電流を発生させる場合があります。

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

⚠ 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.

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.

FRU を取り外す前に、 ThinkPad の電源を切って、すべての電源コードをコンセントから外してください。次に、バッテリー・パックを外し、相互接続ケーブルを外してください。

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.

Laser compliance statement

Some models of Lenovo 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, beállításoktól 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 kontrôl, úprav alebo iných vykonaní od iných
výrobcov, ako je v tomto špecifikované, mohlo by mať
za následok nebezpečenstvo vystavenia sa vyžiarovaniu.

本書で指定された内容以外の、お客様による整備、調整、または手順を行った場合、レーザー光の放射の危険があります。

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**.

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，请勿盯视激光光束，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!

Aprendo 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 nehľadte priamo s optickými nástrojmi do ľúča
a vyhnite sa priamemu vystaveniu ľúčov.

開けるとレーザー光が放射されます。光線を見つめたり、光学機械を使って直接見たりしないでください。

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

Important service information

This chapter presents the following important service information:

- "Strategy for replacing FRUs" on page 16
  - "Strategy for replacing a hard disk drive" on page 17
  - "Important notice for replacing a system board" on page 17
- "Important information about replacing RoHS compliant FRUs" on page 18

Important:

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

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.

After a system board is replaced, ensure that the latest BIOS is loaded to the system board before completing the service action.

To download software fixes, drivers, and BIOS, follow the steps below:

1. Go to http://support.lenovo.com.
2. Enter the serial number or select a product or use Lenovo smart downloading.
3. Select the BIOS/Driver/Applications and download.
4. Follow the directions on the screen and install the necessary software.

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

- If you are instructed to replace an FRU, but the replacement does not solve 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 of them, and replacing one of them does not solve 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. This will cause all customer data on the hard disk to be lost. Make sure that the customer has a current backup of the data before performing this action.

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 can cause damage to those components, and may cause a system malfunction.

Attention: When handling a system board:

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

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. 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.

Note: RoHS and non-RoHS FRU part numbers with the same fit and function are identified with unique FRU part numbers.

Lenovo plans to transit to RoHS compliance well before the implementation date and expects its suppliers to be ready to support Lenovo's requirements and schedule in the EU. Products sold in 2005 and 2006 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 with RoHS compliant ones, 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.

General checkout

This chapter presents the following information:

- "What to do first" on page 20
- "Power system checkout" on page 21

Before you go to the checkout, make sure to read the following important notes:

Important notes:

- **Only certified trained personnel can service the computer.**
- **Before replacing any FRU, read the entire page on removing and replacing FRUs.**
- **Carefully remove screws for reuse when replacing FRUs.**
- **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 an FRU only with another FRU of the correct model.** When you replace an FRU, make sure that the machine model and the FRU part number are correct by referring to the FRU parts list.
- **An FRU should not be replaced just 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 an FRU only when a problem recurs. If you suspect that an FRU is defective, clear the error logs 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 an 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. Procedure index and page number in which the failing FRU was detected
6. Failing FRU name and part number
7. Machine type, model number, and serial number
8. 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.

The 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.

Power system checkout

To verify a symptom, follow the steps below:

1. Turn off the computer.
2. Connect the AC adapter.
3. Make sure that power is supplied when you turn on the computer.
4. Turn off the computer.
5. Disconnect the AC adapter.
6. Make sure 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 21
- “Checking operational charging” on page 21

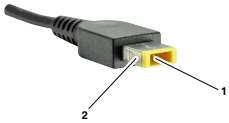
Checking the AC adapter

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, follow the steps below:

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

Note: Output voltage for the AC adapter pin No. 2 may differ 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 “Lenovo Z410/Z510/Z510 Touch” on page 26.

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 light on, remove the battery pack and let it return to room temperature. Reinstall the battery pack. If the charge indicator or icon is still off, replace the battery pack.

If the charge indicator still does not light on, replace the system board. Then reinstall the battery pack.

Related service information

This chapter presents the following information:

- “Restoring the factory contents by using OneKey Recovery” on page 23
- “Passwords” on page 24
- “Power management” on page 25

Restoring the factory contents by using OneKey Recovery

Restore of factory default

The Lenovo Z410/Z510/Z510 Touch computers come with pre-installed OneKey Recovery System.In order to save application files and the initial backed up files of the system, the hard disk in a Lenovo computer includes a hidden partition when it is shipped. If you need to restore the system to the point of your first boot up, just enter Lenovo OneKey Recovery System and run **System Recovery**. For details of OneKey Recovery System, see *the User Guide for Lenovo OneKey Recovery system*.

Note: This will delete all the new data on the system partition (C drive), which is not recoverable. Make sure to back up your critical data before you perform this action.

When you use the recovery discs to boot your computer, the system will enter the user interface for system recovery automatically. Please follow the prompt to insert the backup discs to complete the whole recovery process.

Note: The recovery process might take up to 2 hours.

Passwords

As many as three passwords may be needed for any Lenovo computer: the power-on password (POP) , Hard-disk password, 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.

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 drive even if the user has changed the user HDP

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 Lenov authorized service technicians 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.

Administrator password

If the Administrator password 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.

Power management

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

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

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, To put the computer to sleep, do one of the following:

- Close the display panel.
- Press the power button.
- Open the Charms and then select **Settings** → **Power** → **Sleep**.

Attention: Wait until the power indicator light starts blinking (indicating that the computer is in sleep mode) before you move your computer. Moving your computer while the hard disk is spinning can damage the hard disk, causing loss of data.

To wake the computer, do one of the following:

- Press any key on the keyboard.
- Press the power button.

Lenovo Z410/Z510/Z510 Touch

This chapter presents the following product-specific service references and product-specific parts information:

- "Specifications" on page 26
- "Status indicators" on page 28
- "Function key combinations" on page 30
- "FRU replacement notices" on page 31
- "Removing and replacing an FRU" on page 32
- "Locations" on page 81
- "Parts list" on page 84

Specifications

The following table lists the specifications of the Lenovo Z410/Z510/Z510 Touch:

Table 1. Specifications

Feature	Description
Processor	• View the system properties of your computer. You can do this as follows: Open the **Control Panel**, and then select **System and Security** → **System**.
Core Chipset	• Intel Panther Point HM86
Bus architecture	• GPU: PCIe 3.0, 8 GT/s • WLAN: PCIe 2.0, 5 GT/s • RAM: DDR3L, 1600 MT/s • DMI x 4, 5 GT/s • FDI x 2, 2.7 Gb/s • LCD: eDP 1.2, 5.4 GT/s • HDMI Port: HDMI 1.4, 1.65 GT/s • HDD: SATA 3.0, 6 Gb/s • ODD: SATA 1.0, 1.5 Gb/s • USB Port: USB 3.0, 5 Gb/s • USB 2.0, 480 Mb/s • BT: USB2.0, 480 Mb/s • Card Reader: SD3.0, 50 Mb/s • VGA • SMBus 2.0 • LPC 1.1 • HDA • SPI
Graphic memory chip	• Nvidia N14P-GV2 • Intel HD Graphics 4600
Display	• 14" 16:9, 1366 × 768 pixels HD WXGA/200 nits, 1600x900 HD+/250 nits(option) (Z410) • 15.6" 16:9, 1366 × 768 pixels WXGA/200 nits, FHD 1920x1080 pixels (Z510/Z510 Touch)

Table 1. Specifications (continued)

Feature	Description
Standard memory	• DDR3-1600/1333MHz SODIMM × 2 (max 16 GB)
CMOS RAM	• 256 Byte
Hard disk drive	• 2.5-inch, 7 mm/9.5 mm SATA • 500 GB / 750 GB / 1TB 5400 rpm /8GB + 500 GB SSHD/8GB + 1 TB SSHD
Optical drive	• 2.5" Internal 9.5mm, Rambo, blue-ray Rambo (option)
I/O port	• Combo audio jack × 1 • RJ45 × 1 • HDMI port × 1 • USB 2.0 port × 1, USB 3.0 port × 2 • 2 in 1 slot × 1 (SD/MMC)
Audio	• 1/8" Combo audio jack • 2 × 1.5 W speakers
Ethernet (on the system board)	• 10/100M
PCI Express Mini Card slot	• 1 slot
Bluetooth wireless	• Combo w/ Wifi, BT 4.0 option
Keyboard	• 6 Row, ISO Full Size Keyboard
Touch pad	• Multi-touch type
Integrated camera	• 0.3 M/1.0 M (HD) pixels (Z410/Z510) • 1.0 M (HD) pixels (Z510 Touch)
Battery	• 4 cell, 41.6 Wh or 48 Wh
AC adapter	• 20 V, 65 W or 90 W
Pre-installed operating system	• Win8

Status indicators

The system status indicators below show the computer status:

Z410

Z510/Z510 Touch

Table 2. Status indicators

Indicator	Indicator status	Charge Status	Meaning
■ Power ⏻	On (solid white)	---	The computer is powered on.
	Blinking	---	The computer is in sleep mode.
	Off	---	The computer is powered off.
2 Battery ▭+	On (solid white)	Charging	The battery has more than 80% charge.
		Discharging	The battery has more than 20% charge.
	On (solid amber)	Discharging	The battery has between 5% and 20% charge.
	Blinking slowly (white)	Charging	The battery has between 20% and 80% charge. When the battery reaches 80% charge, the light will stop blinking. However, charging will continue until the battery is fully charged.
	Blinking slowly (amber)	Charging	The battery has less than 20% charge. When battery charge reaches 20%, the blinking color will change to white.
	Blinking quickly (amber)	Charging/ Discharging	The battery has less than 5% charge.

Function key combinations

The following table shows the function of each combination of function key.

Table 3. Fn key combinations

Key combination	Description
Fn + PgUp:	Enables/disables the scroll lock.
Fn + PgDn:	Activates the system request.
Fn + Home:	Activates the pause function.
Fn + End:	Activates the break function.
Fn + Space (on select models):	Enables/disables the keyboard backlight.

Table 4. Hotkeys

:	Mutes/unmutes the sound.
:	Decreases the volume level.
:	Increases the volume level.
:	Closes the currently active window.
:	Refreshes the desktop or the currently active window.
:	Enables/disables the touchpad.
:	Enables/disables Airplane mode.
:	Displays all currently active apps.
:	Turns on/off the backlight of the LCD screen.
:	Toggles the display between the computer and an external device.
:	Decreases display brightness.
:	Increases display brightness.

FRU replacement notices

This section presents 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 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.
- Carefully remove screws for reuse when replacing FRUs.

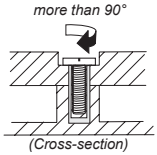
Do the following when you service this machine:

- Keep the screw kit in your tool bag.
- Use a torque screwdriver if you have one.

Tighten screws as follows:

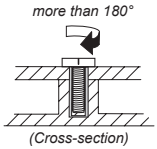
- **Plastic to plastic**

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



- **Logic card to plastic**

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



- **Torque driver**

  If you have a torque screwdriver , refer to the “Torque” column for each step.
- Make sure that you use the correct screws. If you have a torque screwdriver, tighten all screws firmly to the torque shown in the table. **Carefully remove screws for reuse when replacing FRUs. Make sure that all screws are tightened firmly.**
- Ensure torque screwdrivers are calibrated correctly following country specifications.

Removing and replacing an FRU

This section presents exploded figures with the instructions to indicate how to remove and replace the FRU. Make sure to observe the following general rules:

1. Do not attempt 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 31.
3. Begin by removing any FRUs that have to be removed before the failing FRU. Any of 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 to remove the FRU, as given in the figures by the numbers in square callouts.
5. When turning a screw to replace an FRU, turn it in the direction as given by the arrow in the figure.
6. When removing the FRU, move it in the direction as given by the arrow in the figure.
7. To put the new FRU in place, reverse the removal procedures and follow any of the notes that pertain to replacement. For information about connecting and arranging internal cables, see “Locations” on page 81.
8. When replacing an 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, and then disconnect any of the interconnecting cables.

Attention: After replacing an 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.

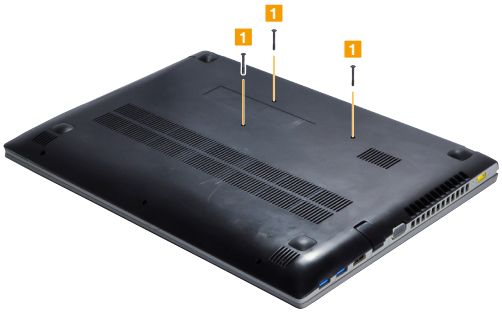
Attention: The system board is sensitive to, and can be damaged by, electrostatic discharge. Before touching it, establish personal grounding by touching a ground point with one hand or using an electrostatic discharge (ESD) strap (P/N 6405959) to remove potential shock reasons.

1010 Keyboard

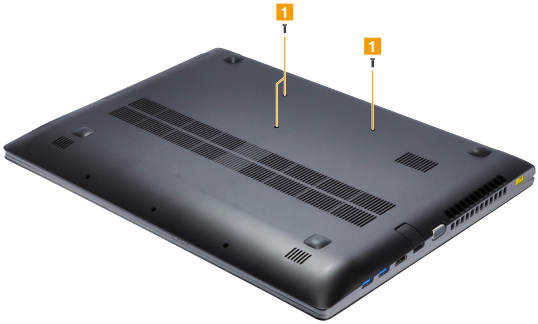
Figure 1. Removal steps of keyboard

Remove the screws ■.

Z410



Z510/Z510 Touch



Step	Screw (quantity)	Color	Torque
■	M2 × 12 mm, flat-head, nylok-coated (3) (Z410) Logic Lower to K/B	Black	1.85+/-0.15 kgf/cm
■	M2 × 4.9 mm, flat-head, nylok-coated (3) (Z510/Z510 Touch) Logic Lower to K/B	Black	1.85+/-0.15 kgf/cm

Figure 1. Removal steps of keyboard (continued)

Insert the screwdriver into one of the screw hole on the bottom 2. Then pull the keyboard out of the keyboard bezel 3.

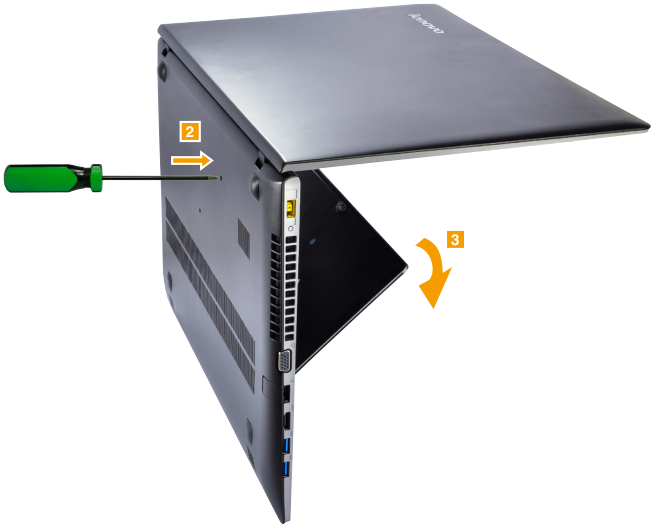


Figure 1. Removal steps of keyboard (continued)

Lift the keyboard a little, and then detach the connectors in the direction shown by arrows 4 5. Remove the keyboard in the direction shown by arrow 6.

Z410

Figure 1. Removal steps of keyboard (continued)

Z510/Z510 Touch

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

1020 Optical drive

For access, remove this FRU:

- “1010 Keyboard” on page 33

Figure 2. Removal steps of optical drive

Remove the screw ■.

Step	Screw (quantity)	Color	Torque
■	M2.5 × 6 mm, flat-head, nylok-coated (1) Logic Upper to Logic Lower	Black	3.0+/-0.3 kgf/cm

Figure 2. Removal steps of Optical drive (continued)

Insert a screwdriver into the screw hole and push the optical drive in the direction shown by arrow 2. Pull the optical drive out in the direction shown by arrow 3.

1030 Base cover

For access, remove this FRU:

- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37

Figure 3. Removal steps of base cover

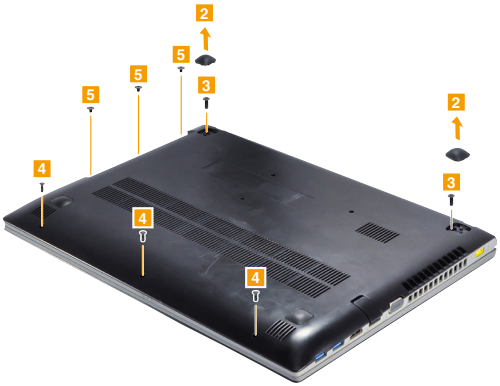
Z410

Remove the screws ■.

Step	Screw (quantity)	Color	Torque
■	M2.5 × 6 mm, flat-head, nylok-coated (4) Logic Upper to Logic Lower	Black	3.0+/-0.3 kgf/cm

Figure 3. Removal steps of base cover (continued)

Remove the two rubber feet 2. Remove the screws 3, 4 and 5 from the bottom.



Step	Screw (quantity)	Color	Torque
3	M2.5 × 6 mm, flat-head, nylok-coated (2) Rubber foot to Logic Upper	Black	3.0+/-0.3 kgf/cm
4	M2 × 4.9 mm, flat-head, nylok-coated (3) Logic Lower to Logic Upper	Black	1.85+/-0.15 kgf/cm
5	M2 × 2.5 mm, flat-head, nylok-coated (3) Logic Lower to Logic Upper	Black	1.85+/-0.15 kgf/cm

Remove the base cover in the direction shown by arrow 6.

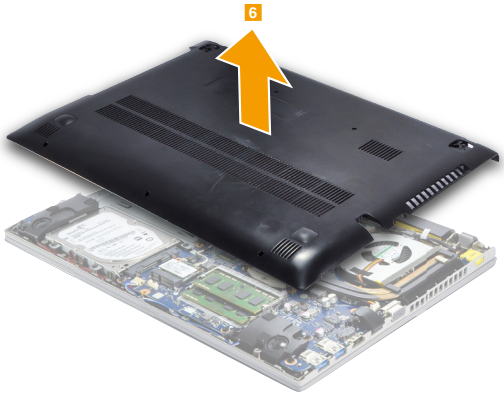


Figure 3. Removal steps of base cover (continued)

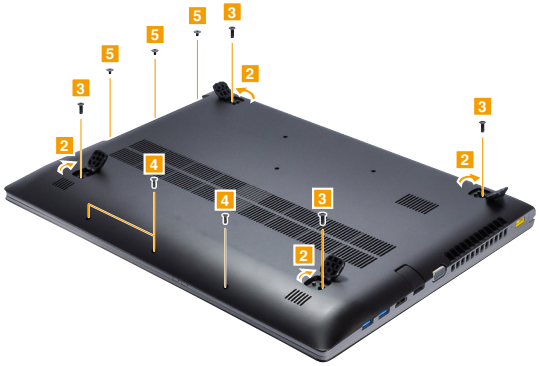
Z510/Z510 Touch

Remove the screws ■.

Step	Screw (quantity)	Color	Torque
■	M2.5 × 6 mm, flat-head, nylok-coated (5) Logic Upper to Logic Lower	Black	3.0+/-0.3 kgf/cm

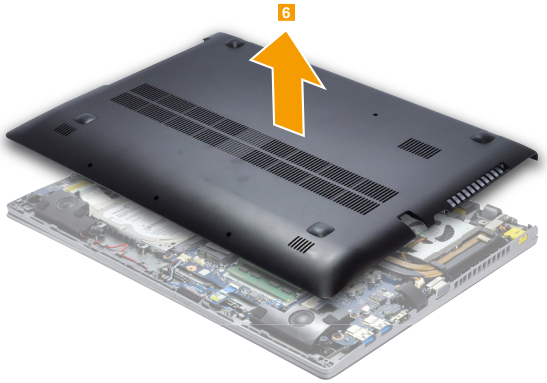
Figure 3. Removal steps of base cover (continued)

Open the four rubber feet 2. Remove the screws 3, 4 and 5 from the bottom.



Step	Screw (quantity)	Color	Torque
3	M2.5 × 6 mm, flat-head, nylok-coated (4) Rubber foot to Logic Upper	Black	3.0+/-0.3 kgf/cm
4	M2 × 4.9 mm, flat-head, nylok-coated (3) Logic Lower to Logic Upper	Black	1.85+/-0.15 kgf/cm
5	M2 × 2.5 mm, flat-head, nylok-coated (3) Logic Lower to Logic Upper	Black	1.85+/-0.15 kgf/cm

Remove the base cover in the direction shown by arrow 6.



Note: Applying labels to the base cover

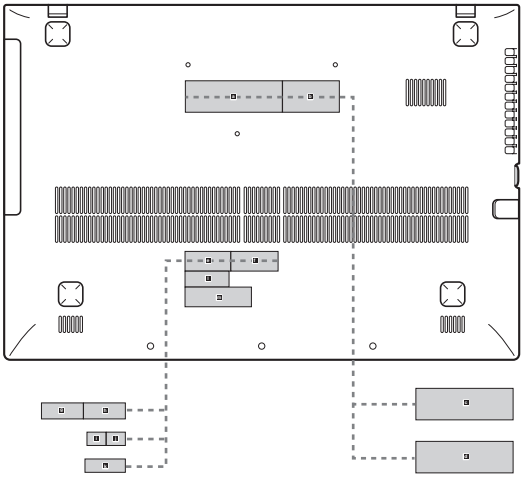
The new base cover FRU is shipped with a kit containing labels of several kinds. When you replace the base cover, you need to apply the following label:

The following labels need to be peeled off from the old base cover, and need to be put on the new base cover.

a Rating label
b Rating label
c Rating label for China
d Rating label for WW
e Brazil BT label
f Brazil WL label
g BT label for US/CA/TW/INDONESIA
h WL label for US/CA/TW/INDONESIA
i SIRIM BT label
j SIRIM WL label
k Israel WL label
l Indonesia D side label
m KCC label

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

For the location of each label, refer to the following figure:



1040 Battery pack

For access, remove these FRUs in order:

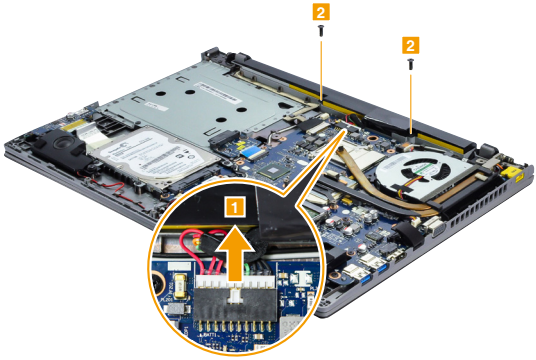
- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37
- “1030 Base cover” on page 39

⚠ DANGER

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

Figure 4. Removal steps of battery pack

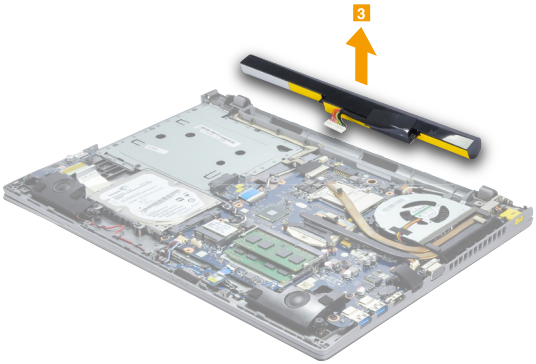
Detach the battery pack connector in the direction shown by arrow 1, remove the screws 2.



Step	Screw (quantity)	Color	Torque
2	M2.5 × 6 mm, flat-head, nylok-coated (2) Logic Upper to Battery	black	3.0+/-0.3 kgf/cm

Figure 4. Removal steps of battery pack (continued)

Remove the battery pack in the direction shown by arrow 3.



When installing: Make sure the battery pack connector is attached firmly.

1050 Hard disk drive

For access, remove these FRUs in order:

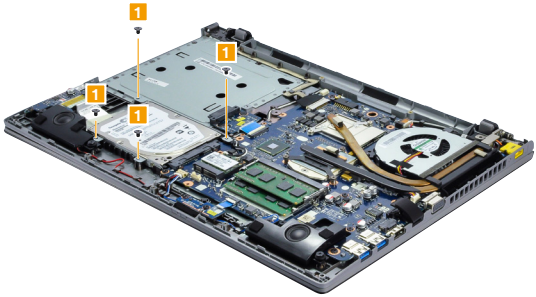
- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37
- “1030 Base cover” on page 39
- “1040 Battery pack” on page 44

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 damages and permanent loss of data.
- Before removing the drive, suggest the customer to backup all the information on it if possible.
- Never remove the drive while the system is operating or is in suspend mode.

Figure 5. Removal steps of hard disk drive

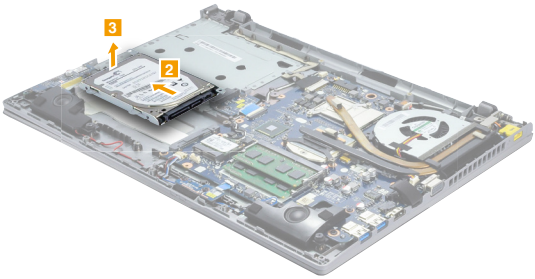
Remove the screws ■.



Step	Screw (quantity)	Color	Torque
■	M2.5 × 3 mm, flat-head, nylok-coated (4) HDD to Logic Upper	Black	3.0+/-0.3 kgf/cm

Figure 5. Removal steps of hard disk drive (continued)

Detach the HDD connector in the direction shown by arrow 2. Remove the hard disk drive from the slot in the direction shown by arrow 3.



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

Remove the screws 4, then take out the metal frame.

Step	Screw (quantity)	Color	Torque
4	M3 × 3 mm, flat-head, nylok-coated (4) HDD_BRK to module	White	3.0+/-0.3 kgf/cm

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

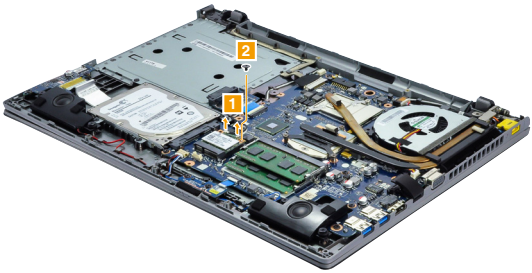
1060 PCI Express Mini Card for wireless LAN

For access, remove these FRUs in order:

- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37
- “1030 Base cover” on page 39
- “1040 Battery pack” on page 44

Figure 6. Removal steps of PCI Express Mini Card for wireless LAN

Disconnect the two wireless LAN cables (black, white) ■, and then remove the screw 2.



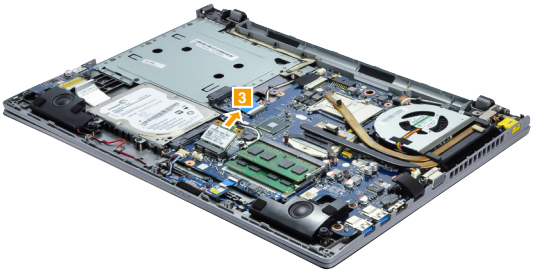
In step ■, unplug the jacks by using the removal tool antenna RF connector (P/N: 08K7159), or pick up the connectors with your fingers and gently unplug them in the direction shown by arrows.

Notes: wireless LAN card has 2 cables in step ■.
wireless LAN card in some models may have 3 cables in step ■.

Step	Screw (quantity)	Color	Torque
2	M2 × 2.5 mm, flat-head, nylok-coated (1) WLAN Card to MB	Black	1.85+/-0.15 kgf/cm

Figure 6. Removal steps of PCI Express Mini Card for wireless LAN (continued)

Remove the card in the direction shown by arrow 3.



When installing:

- In models with a wireless LAN card that has two antenna connectors, plug the black cable (1st) (MAIN) into the jack labeled **1**, and the white cable (2nd) (AUX) into jack labeled **2** on the card.
- In models with a wireless LAN card that has three antenna connectors, plug the black cable (1st) (MAIN) into the jack labeled **1**, the grey cable (3rd) into jack labeled **3**, and the white cable (2nd) (AUX) into jack labeled **2** on the card.

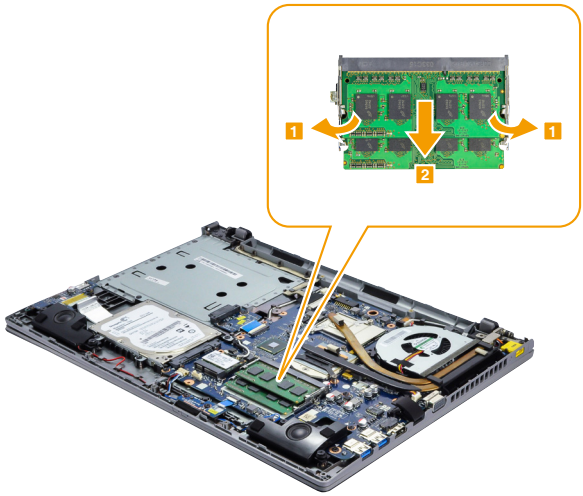
1070 DIMM

For access, remove these FRUs in order:

- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37
- “1030 Base cover” on page 39
- “1040 Battery pack” on page 44

Figure 7. Removal steps of DIMM

Release the two latches on both edges of the socket at the same time in the direction shown by arrows 1, and then unplug the DIMM in the direction shown by arrow 2.



When installing: Insert the notched end of the DIMM into the socket. Push the DIMM firmly, and pivot it until it snaps into the place. Make sure that it is firmly fixed in the slot and difficult to be moved.

1080 Fan assembly and Heat Sink assembly

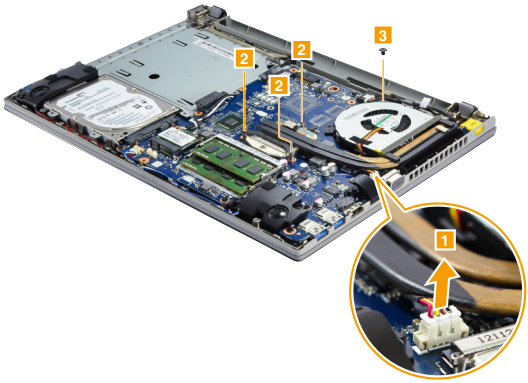
For access, remove these FRUs in order:

- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37
- “1030 Base cover” on page 39
- “1040 Battery pack” on page 44

Figure 8. Removal steps of fan assembly and heat sink assembly

Detach the fan connector in the direction shown by arrow ■ , and then loosen the screws 2 and remove the screw 3.

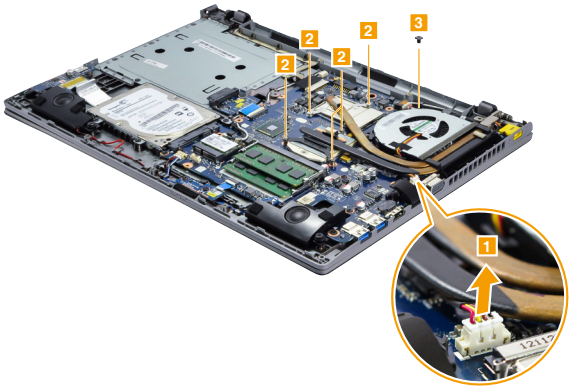
Z410



Step	Screw (quantity)	Color	Torque
3	M2 × 3, flat-head, nylok-coated (1) FAN to Logic Upper	Black	1.85+/-0.15 kgf/cm

Figure 8. Removal steps of fan assembly and heat sink assembly (continued)

Z510/Z510 Touch



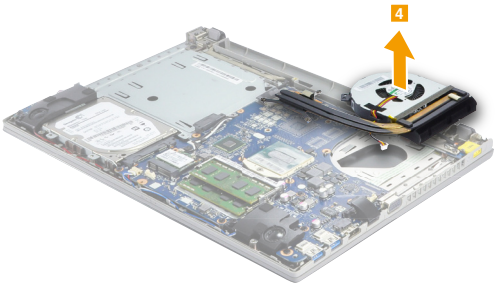
Step	Screw (quantity)	Color	Torque
3	M2 × 3.2, flat-head, nylok-coated (1) FAN to Logic Upper	Black	1.85+/-0.15 kgf/cm

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

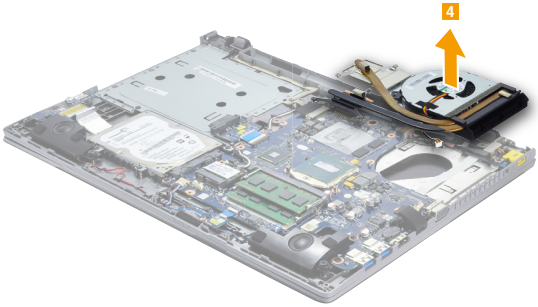
Figure 8. Removal steps of fan assembly and heat sink assembly (continued)

Lift the fan assembly and heat sink assembly in the direction shown by arrow 4. Be careful not to damage the connector.

Z410



Z510/Z510 Touch



Attention: Do not handle the heat sink assembly roughly. Improper handling can cause distortion or deformation and imperfect contact with components.

1090 CPU

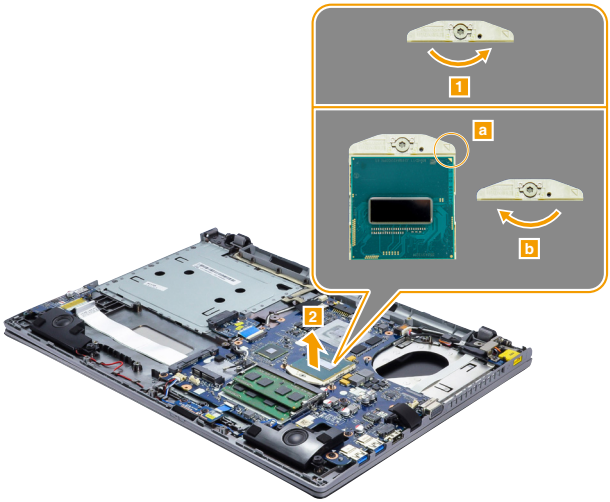
For access, remove these FRUs in order:

- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37
- “1030 Base cover” on page 39
- “1040 Battery pack” on page 44
- “1050 Hard disk drive” on page 46
- “1060 PCI Express Mini Card for wireless LAN” on page 48
- “1080 Fan assembly and Heat Sink assembly” on page 51

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

Figure 9. Removal steps of CPU

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 in the direction shown by arrow a, and then rotate the head of the screw in the direction shown by arrow b to secure the CPU.

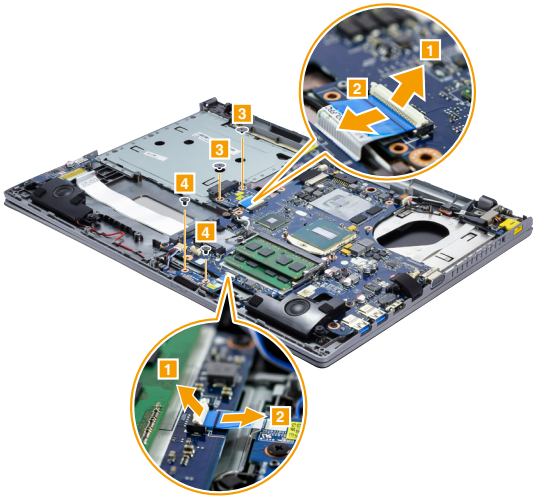
1100 ODD board and LED board (Z510/Z510 Touch)

For access, remove these FRUs in order:

- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37
- “1030 Base cover” on page 39
- “1040 Battery pack” on page 44
- “1050 Hard disk drive” on page 46
- “1060 PCI Express Mini Card for wireless LAN” on page 48
- “1080 Fan assembly and Heat Sink assembly” on page 51

Figure 10. Removal steps of ODD board and LED board (Z510/Z510 Touch)

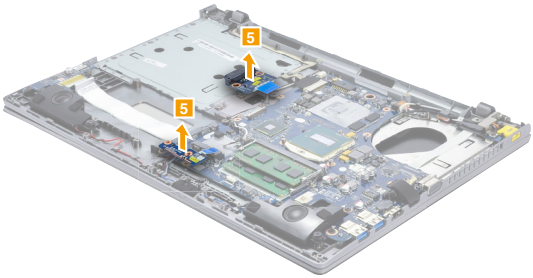
Detach the two FPC connectors in the direction shown by arrows ■ 2. Remove the screws 3 and 4.



Step	Screw (quantity)	Color	Torque
3	M2 × 2.5, flat-head, nylok-coated (2)	Black	1.85+/-0.15 kgf/cm
4	M2 × 3, flat-head, nylok-coated (2)	Black	1.85+/-0.15 kgf/cm

Figure 10. Removal steps of ODD board and LED board (Z510/Z510 Touch) (continued)

Remove the two boards in the direction shown by arrows 5.



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

1110 Speakers

For access, remove these FRUs in order:

- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37
- “1030 Base cover” on page 39
- “1040 Battery pack” on page 44
- “1050 Hard disk drive” on page 46
- “1060 PCI Express Mini Card for wireless LAN” on page 48
- “1080 Fan assembly and Heat Sink assembly” on page 51
- “1100 ODD board and LED board (Z510/Z510 Touch)” on page 55

Figure 11. Removal steps of speakers

Detach the speakers connector in the direction shown by arrow ■. Remove the screws 2.

Z410

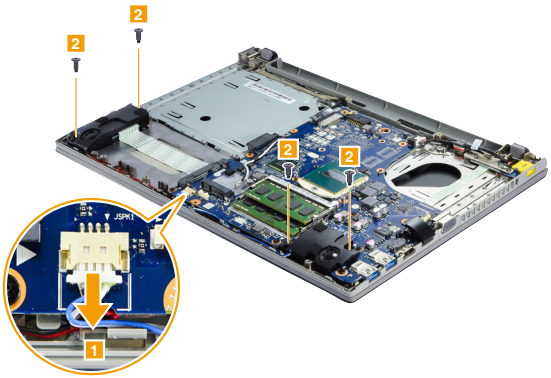
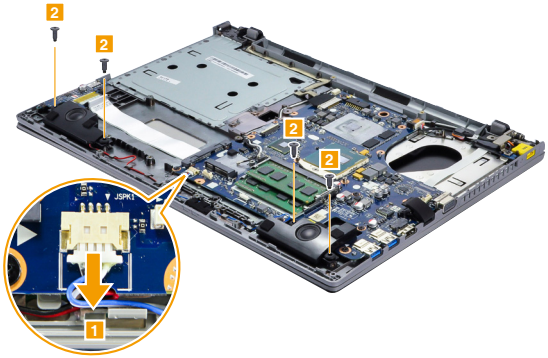


Figure 11. Removal steps of speakers (continued)

Z510/Z510 Touch

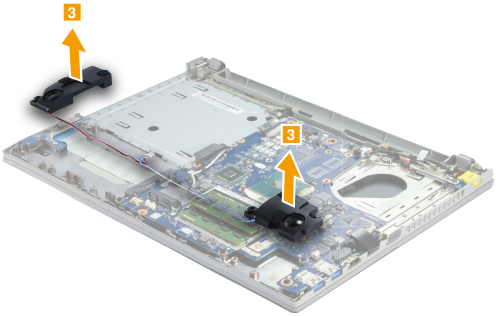


Step	Screw (quantity)	Color	Torque
2	M2 × 5.7+2, flat-head, nylok-coated (4) Speaker to Logic Upper	Black	1.85+/-0.15 kgf/cm

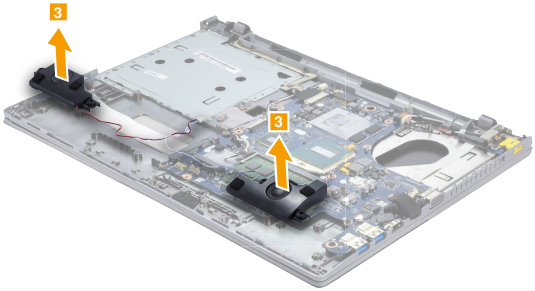
Figure 11. Removal steps of speakers (continued)

Remove the speakers 3.

Z410



Z510/Z510 Touch



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

1120 System board

Important notices for handling the system board:

When handling the system board, bear the following in mind.

- Be careful not to drop the system board on a bench top that has a hard surface, such as metal, wood, or composite.
- Avoid rough handling of any kind.
- In the whole process, make sure not to drop or stack the system board.
- If you put a system board down, make sure to put it only on a padded surface such as an ESD mat or conductive corrugated material.

For access, remove these FRUs in order:

- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37
- “1030 Base cover” on page 39
- “1040 Battery pack” on page 44
- “1050 Hard disk drive” on page 46
- “1060 PCI Express Mini Card for wireless LAN” on page 48
- “1080 Fan assembly and Heat Sink assembly” on page 51
- “1100 ODD board and LED board (Z510/Z510 Touch)” on page 55
- “1110 Speakers” on page 57

Figure 12. Removal steps of system board

Detach the three FPC connectors in the direction shown by arrows ■ 2.

Z410

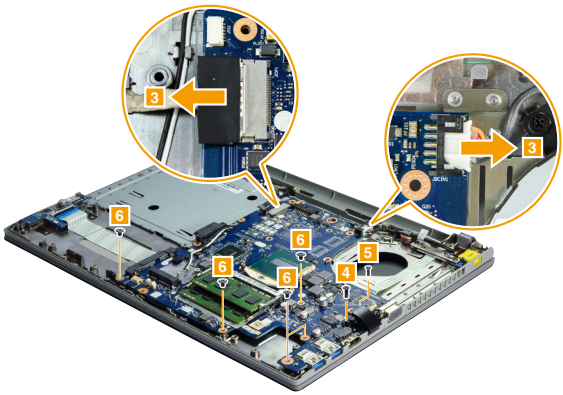
Figure 12. Removal steps of system board (continued)

Z510/Z510 Touch

Figure 12. Removal steps of system board (continued)

Detach the connectors in the direction shown by arrows 3. Remove the screws 4, 5 and 6.

Z410



Z510

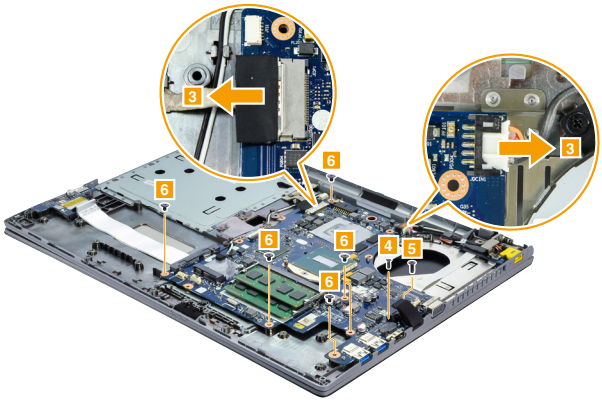
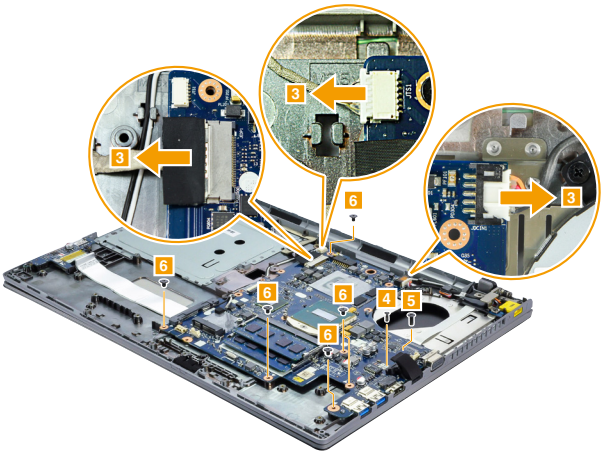


Figure 12. Removal steps of system board (continued)

Z510 Touch

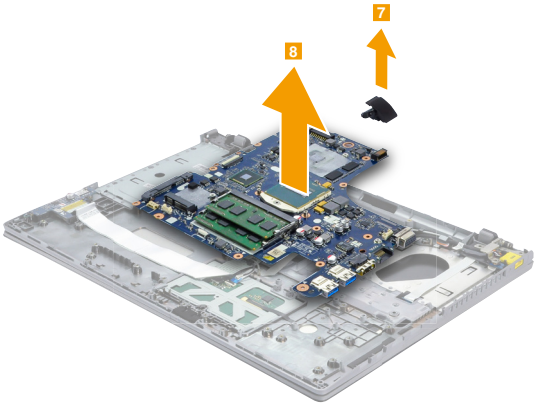


Step	Screw (quantity)	Color	Torque
4	M2.5 × 6 mm, flat-head, nylok-coated (1) (Z410) RJ45 Cover to MB	Black	3.0+/-0.3 kgf/cm
4	M2.0 × 4.9 mm, flat-head, nylok-coated (1) (Z510/Z510 Touch) RJ45 Cover to MB	Black	1.85+/-0.15 kgf/cm
5	M2.0 × 4.9 mm, flat-head, nylok-coated (1) (Z410) RJ45 Cover to Logic Upper	Black	1.85+/-0.15 kgf/cm
5	M2.5 × 6 mm, flat-head, nylok-coated (1) (Z510/Z510 Touch) RJ45 Cover to Logic Upper	Black	3.0+/-0.3 kgf/cm
6	M2.5 × 3 mm, flat-head, nylok-coated (4) (Z410) MB to Logic Upper	Black	3.0+/-0.3 kgf/cm
6	M2.5 × 3 mm, flat-head, nylok-coated (5) (Z510/Z510 Touch) MB to Logic Upper	Black	3.0+/-0.3 kgf/cm

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

Figure 12. Removal steps of system board (continued)

Remove the RJ-45 door in the direction shown by arrow 7. Remove the system board in the direction shown by arrow 8.



1130 LCD unit

For access, remove these FRUs in order:

- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37
- “1030 Base cover” on page 39
- “1040 Battery pack” on page 44
- “1050 Hard disk drive” on page 46
- “1060 PCI Express Mini Card for wireless LAN” on page 48
- “1070 DIMM” on page 50
- “1080 Fan assembly and Heat Sink assembly” on page 51
- “1100 ODD board and LED board (Z510/Z510 Touch)” on page 55
- “1110 Speakers” on page 57
- “1120 System board” on page 60

Figure 13. Removal steps of LCD unit

Z410

Remove the screws ■ and ■′.

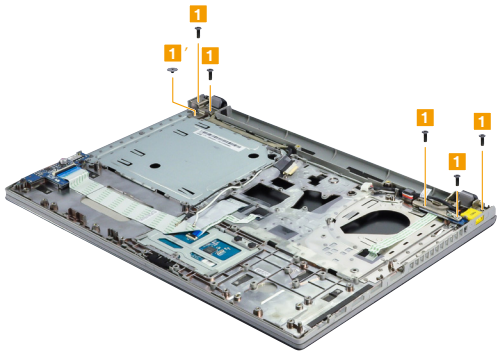
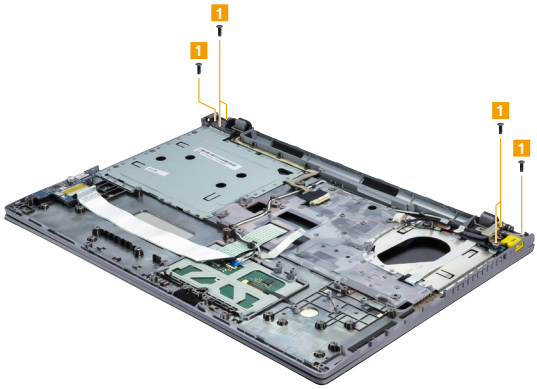


Figure 13. Removal steps of LCD unit (continued)

Z510/Z510 Touch

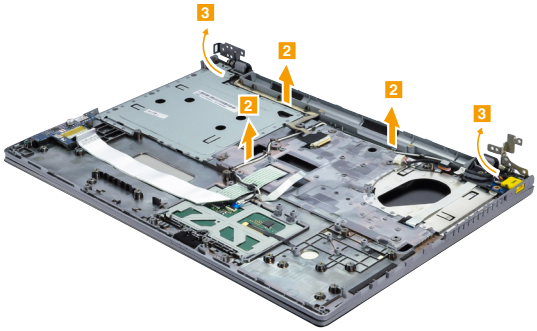
Remove the screws ■.



Step	Screw (quantity)	Color	Torque
■	M2.5 × 6 mm, flat-head, nylok-coated (5) (Z410) LCD Ass'y to Logic Upper	Black	3.0+/-0.3 kgf/cm
■	M2.5 × 6 mm, flat-head, nylok-coated (6) (Z510/Z510 Touch) LCD Ass'y to Logic Upper	Black	3.0+/-0.3 kgf/cm
■′	M2 × 2 mm, flat-head, nylok-coated (1) (Z410) LCD Ass'y to Logic Upper	Black	1.85+/-0.15 kgf/cm

Figure 13. Removal steps of LCD unit (continued)

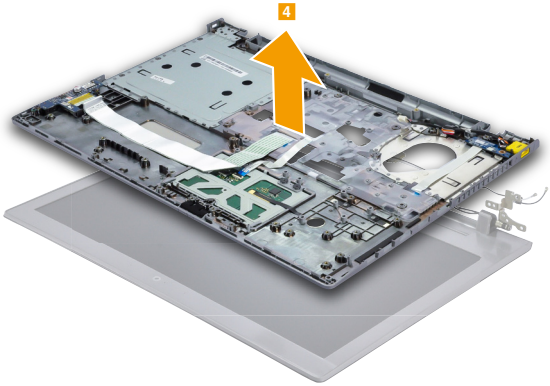
Release the LCD cable from the cable guides in the direction shown by arrows 2. Then lift the LCD hinge in the direction shown by arrow 3.



When installing:

- Route the antenna cables along the cable guides. As you route the cables, make sure that they are not subjected to any tension. Tension could cause the cables to be damaged by the cable guides, or a wire to be broken.
- Make sure that the LCD connector is attached firmly and make sure that you do not pinch the antenna cables when you attach the LCD assembly. Route the LCD cable along the cable guides.

Remove the keyboard bezel from the LCD unit in the direction shown by arrows 5.



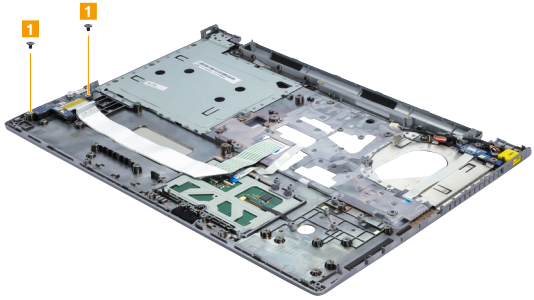
1140 Keyboard bezel

For access, remove these FRUs in order:

- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37
- “1030 Base cover” on page 39
- “1040 Battery pack” on page 44
- “1050 Hard disk drive” on page 46
- “1060 PCI Express Mini Card for wireless LAN” on page 48
- “1070 DIMM” on page 50
- “1080 Fan assembly and Heat Sink assembly” on page 51
- “1100 ODD board and LED board (Z510/Z510 Touch)” on page 55
- “1110 Speakers” on page 57
- “1120 System board” on page 60
- “1130 LCD unit” on page 65

Figure 14. Removal steps of keyboard bezel

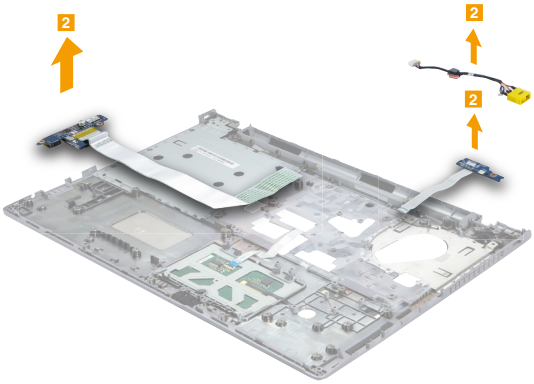
Remove the screws ■.



Step	Screw (quantity)	Color	Torque
■	M2.5 × 3 mm, flat-head, nylok-coated (2) USB Board to Logic Upper	Black	3.0+/-0.3 kgf/cm

Figure 14. Removal steps of keyboard bezel (continued)

Remove the power board, USB board and DC-in jack in the direction shown by arrows 2.



1150 LCD front bezel/LCD hinge cover

For access, remove these FRUs in order:

- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37
- “1030 Base cover” on page 39
- “1040 Battery pack” on page 44
- “1050 Hard disk drive” on page 46
- “1060 PCI Express Mini Card for wireless LAN” on page 48
- “1070 DIMM” on page 50
- “1080 Fan assembly and Heat Sink assembly” on page 51
- “1100 ODD board and LED board (Z510/Z510 Touch)” on page 55
- “1110 Speakers” on page 57
- “1120 System board” on page 60
- “1130 LCD unit” on page 65
- “1140 Keyboard bezel” on page 68

Figure 15. Removal steps of LCD front bezel/LCD hinge cover

Z410/Z510

Remove the LCD front bezel in the direction shown by arrows ■.

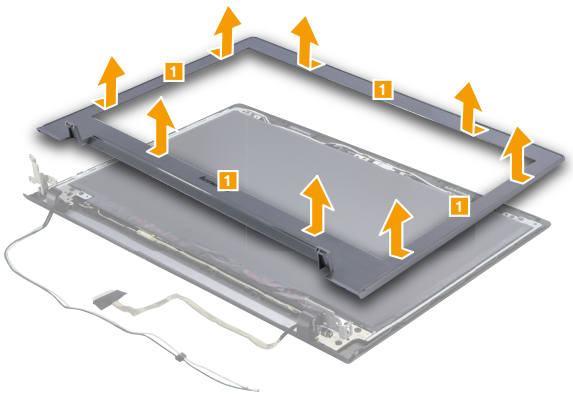
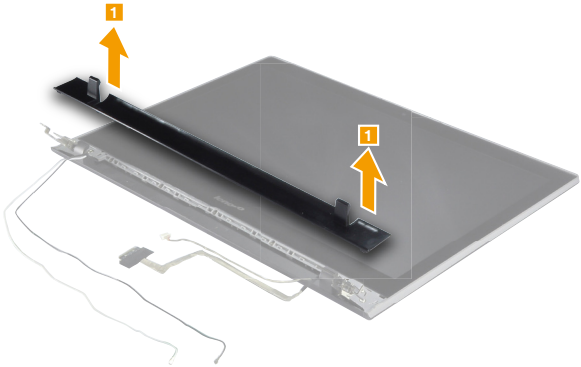


Figure 15. Removal steps of LCD front bezel/LCD hinge cover (continued)

Z510 Touch

Remove the LCD front bezel in the direction shown by arrows ■.



1160 LCD panel/LCD module

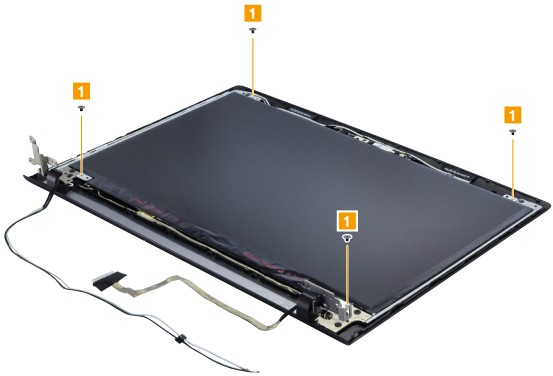
For access, remove these FRUs in order:

- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37
- “1030 Base cover” on page 39
- “1040 Battery pack” on page 44
- “1050 Hard disk drive” on page 46
- “1060 PCI Express Mini Card for wireless LAN” on page 48
- “1070 DIMM” on page 50
- “1080 Fan assembly and Heat Sink assembly” on page 51
- “1100 ODD board and LED board (Z510/Z510 Touch)” on page 55
- “1110 Speakers” on page 57
- “1120 System board” on page 60
- “1130 LCD unit” on page 65
- “1140 Keyboard bezel” on page 68
- “1150 LCD front bezel/LCD hinge cover” on page 70

Figure 16. Removal steps of LCD panel/LCD module

Z410/Z510

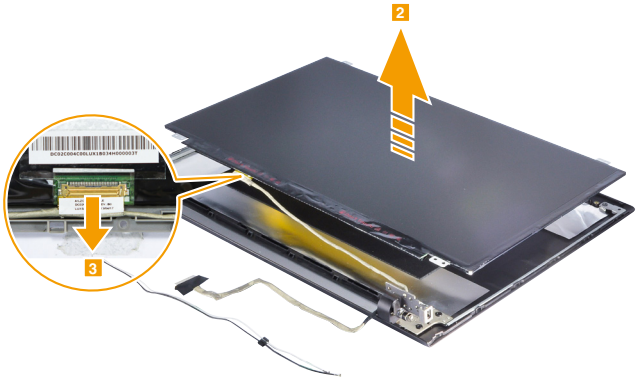
Remove the screws ■.



Step	Screw (quantity)	Color	Torque
■	M2 × 2.5 mm, flat-head, nylok-coated (4) LCD_PANEL to LCD COVER	Black	1.85+/-0.15 kgf/cm

Figure 16. Removal steps of LCD panel/LCD module (continued)

Lift the LCD panel a little 2. Peel off the adhesive tape and detach the connector in the direction shown by arrow 3.



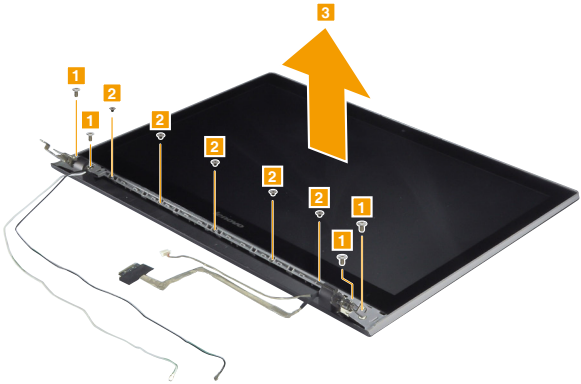
When installing: Make sure that the metal connector is attached firmly.

Remove the LCD panel 4.

Figure 16. Removal steps of LCD panel/LCD module (continued)

Z510 Touch

Remove the screws ■ and 2, then remove the LCDI module 3.



Step	Screw (quantity)	Color	Torque
■	M2 × 2.5 mm, flat-head, nylok-coated (4) LCD_PANEL to LCD COVER	White	1.85+/-0.15 kgf/cm
2	M2.5 × 5 mm, flat-head, nylok-coated (5) LCD_PANEL to LCD COVER	Black	3.0+/-0.3 kgf/cm

1170 LCD Hinges

For access, remove these FRUs in order:

- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37
- “1030 Base cover” on page 39
- “1040 Battery pack” on page 44
- “1050 Hard disk drive” on page 46
- “1060 PCI Express Mini Card for wireless LAN” on page 48
- “1070 DIMM” on page 50
- “1080 Fan assembly and Heat Sink assembly” on page 51
- “1100 ODD board and LED board (Z510/Z510 Touch)” on page 55
- “1110 Speakers” on page 57
- “1120 System board” on page 60
- “1130 LCD unit” on page 65
- “1140 Keyboard bezel” on page 68
- “1150 LCD front bezel/LCD hinge cover” on page 70
- “1160 LCD panel/LCD module” on page 72

Figure 17. Removal steps of LCD hinges

Z410

Remove the screws ■ and 2. Then release the two hinges in the direction shown by arrows 3.

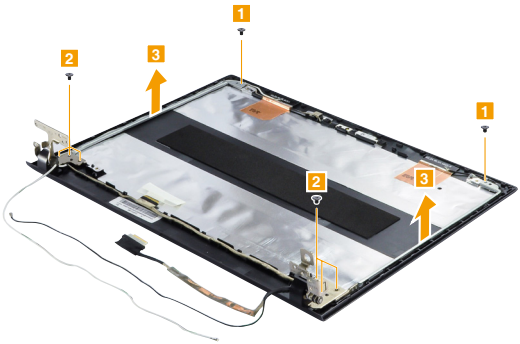
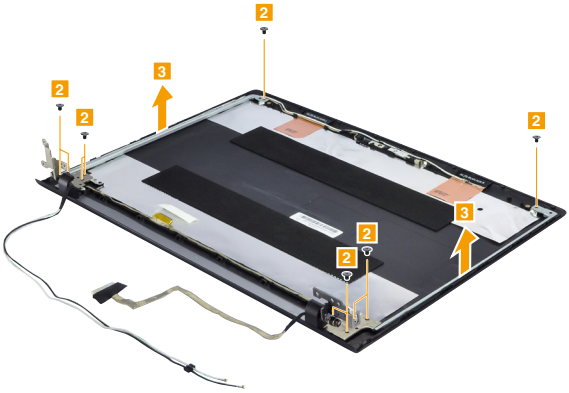


Figure 17. Removal steps of LCD hinges (continued)

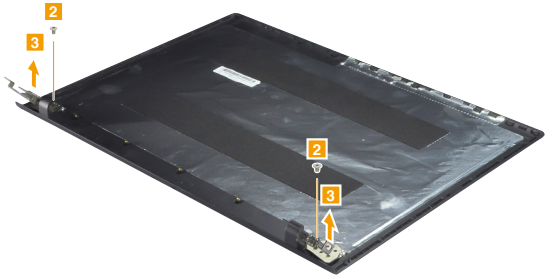
Z510

Remove the screws 2. Then release the two hinges in the direction shown by arrows 3.



Z510 Touch

Remove the screws 2. Then release the two hinges in the direction shown by arrows 3.



Step	Screw (quantity)	Color	Torque
■	M2 × 2.5 mm, flat-head, nylok-coated (2) (Z410) Hinge L/R to LCD Cover	Black	1.85+/-0.15 kgf/cm
2	M2.5 × 3 mm, flat-head, nylok-coated (6) (Z410) Hinge L/R to LCD Cover	Black	3.0+/-0.3 kgf/cm
2	M2 × 3 mm, flat-head, nylok-coated (10) (Z510) Hinge L/R to LCD Cover	Black	1.85+/-0.15 kgf/cm
2	M2.5 × 3 mm, flat-head, nylok-coated (2) (Z510 Touch) Hinge L/R to LCD Cover	White	3.0+/-0.3 kgf/cm

1180 Integrated camera, LCD cable and antenna assembly

For access, remove these FRUs in order:

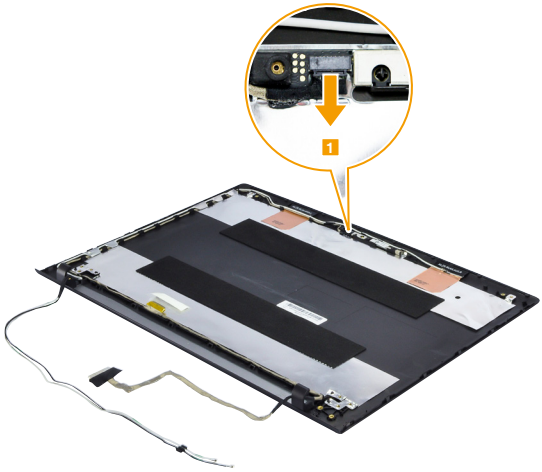
- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37
- “1030 Base cover” on page 39
- “1040 Battery pack” on page 44
- “1050 Hard disk drive” on page 46
- “1060 PCI Express Mini Card for wireless LAN” on page 48
- “1070 DIMM” on page 50
- “1080 Fan assembly and Heat Sink assembly” on page 51
- “1100 ODD board and LED board (Z510/Z510 Touch)” on page 55
- “1110 Speakers” on page 57
- “1120 System board” on page 60
- “1130 LCD unit” on page 65
- “1140 Keyboard bezel” on page 68
- “1150 LCD front bezel/LCD hinge cover” on page 70
- “1160 LCD panel/LCD module” on page 72
- “1170 LCD Hinges” on page 75

Figure 18. Removal steps of integrated camera, LCD cable and antenna assembly

Z410/Z510

Note: The integrated camera is stuck on the top center of the LCD cover.

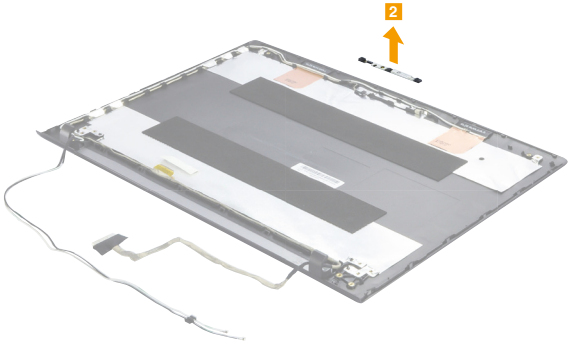
Detach the integrated camera connector in the direction shown by arow ■.



When installing: Stick the integrated camera to the top center of the LCD cover and ajust the placement of it to make sure the connector is attached firmly.

Figure 18. Removal steps of integrated camera, LCD cable and antenna assembly (continued)

Remove the camera in the direction shown by arrow 2.



Remove the LCD cable and antenna assembly in the direction shown by arrows 3.

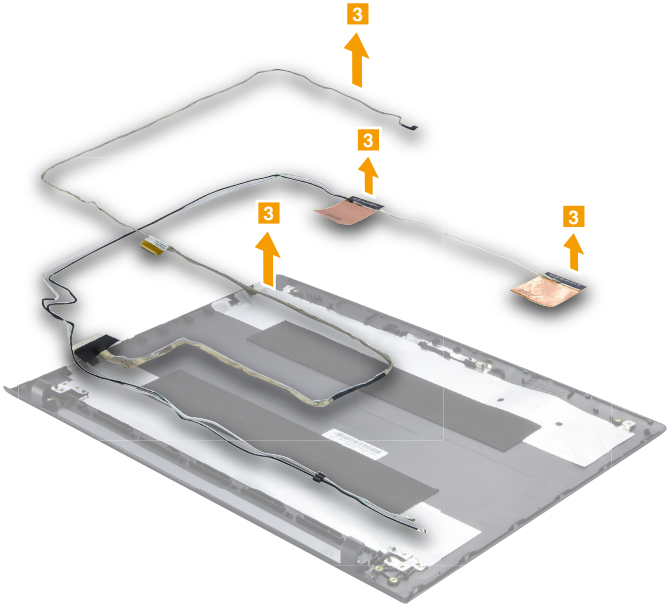
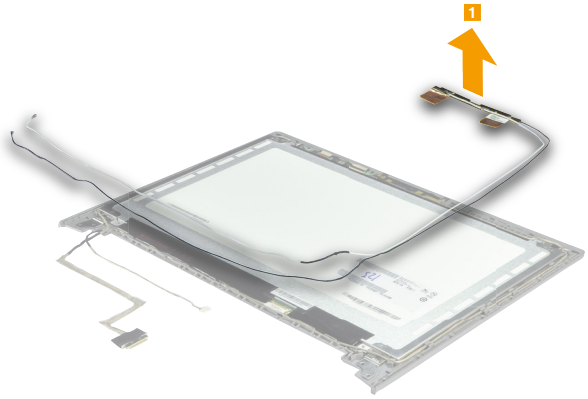


Figure 18. Removal steps of integrated camera, LCD cable and antenna assembly (continued)

Z510 Touch

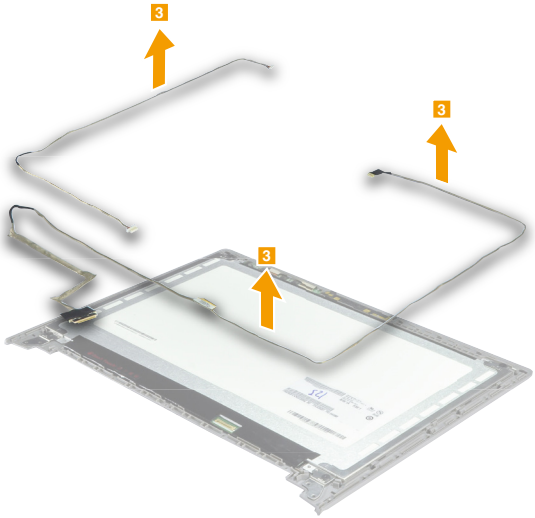
Remove the antenna assembly in the direction shown by arrow ■.



Detach the connectors in the direction shown by arows ■.

Figure 18. Removal steps of integrated camera, LCD cable and antenna assembly (continued)

Remove the camera cable and LCD cable in the direction shown by arrows 3.



Remove the camera in the direction shown by arrow 4.

Locations

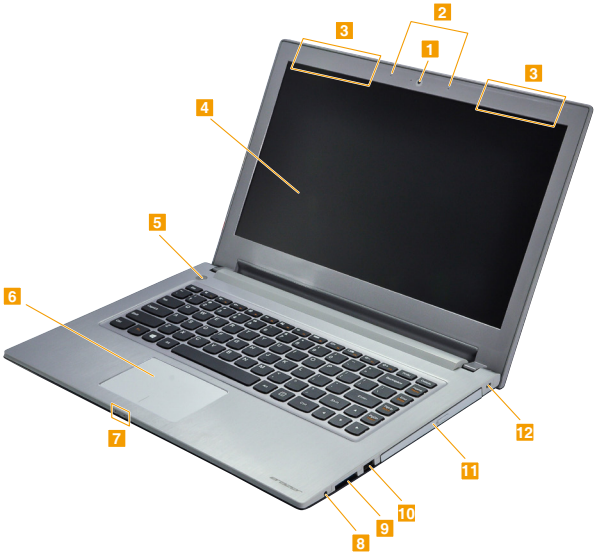
Front view and right-side view

1 Integrated camera
2 Built-in microphone
3 Wireless LAN antennas
4 Computer display
5 Power button
6 Touchpad
7 System status indicators

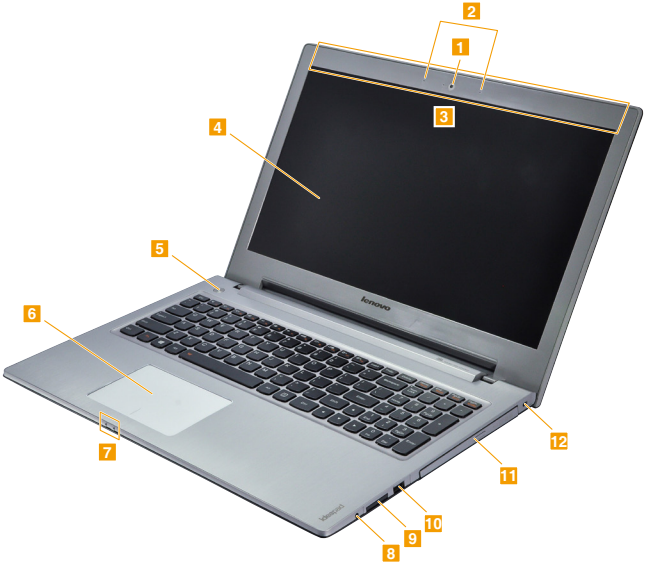
Note: For the description of each indicator, see “Status indicators” on page 28.

8 Combo audio jack
9 Memory card slot
10 USB port
11 Optical drive
12 Kensington slot

Z410



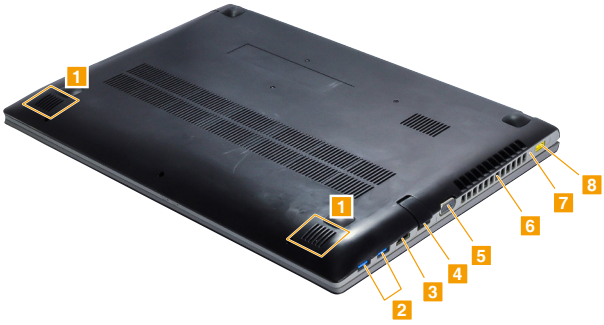
Z510/Z510 Touch



Bottom and Left-side view

1 Speakers
2 USB port
3 HDMI port
4 RJ-45 port
5 VGA port
6 Fan louvers
7 Novo button
8 AC power adapter jack

Z410



Z510/Z510 Touch

Parts list

This section presents the following service parts:

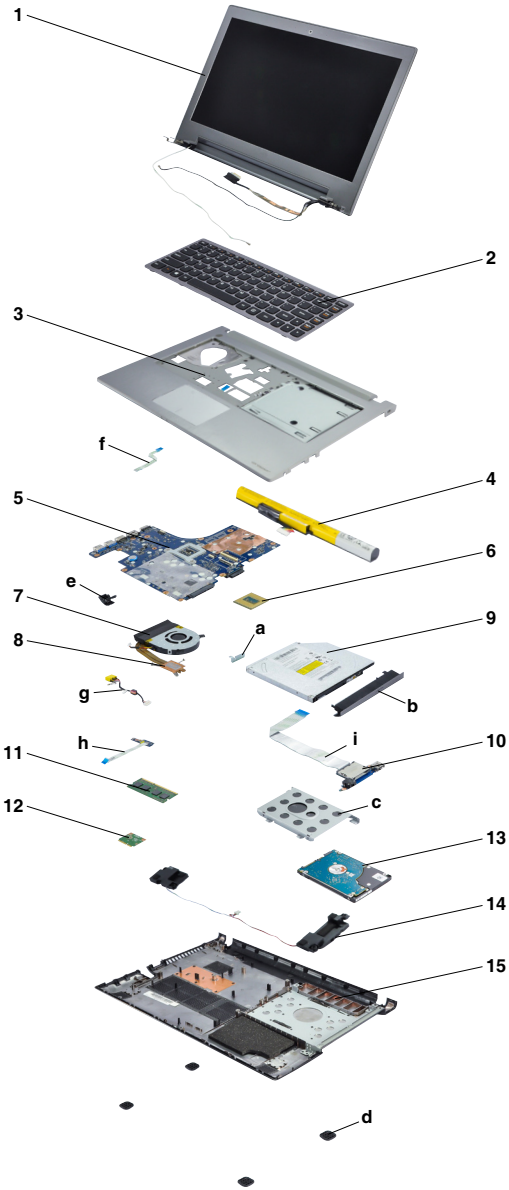
- “Overall” on page 85
- “LCD FRUs” on page 93
- “Keyboard” on page 98
- “Miscellaneous parts” on page 104
- “AC adapters” on page 105
- “Screws” on page 105
- “Power cords” on page 106

Notes:

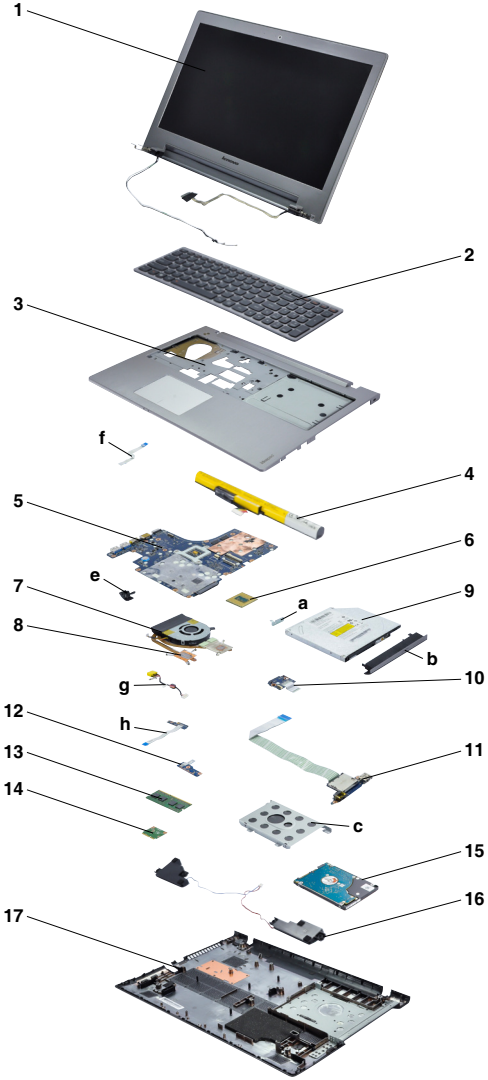
- Each FRU is available for all types or models, unless specific types or models are specified.

Overall

Z410



Z510/Z510 Touch



Z410

Table 5. Parts list—Overall (Z410)

No.	FRU	FRU no.	CRU ID.
a-i	See “Miscellaneous parts” on page 104.		
1	LCD unit (see “LCD FRUs” on page 93.)		
2	Keyboard (see “Keyboard” on page 98.)		
3	AILZA Upper Case	90203969	
3	AILZA Upper Case for Erazer	90203970	
4	Battery, 4S1P, 4cell,48Wh, Sanyo, Z400Z500 SY L12S4K01 14.4V48Wh 4cellbty	121500113	
4	Battery, 4S1P, 4cell,48Wh, Simplo, Zx10 SP/S L12M4F02 15V48Wh 4cellbty	121500202	
4	Battery, 4S1P, 4cell, 41.6Wh, Sanyo, Zx0 SY L12S4E21 14.4V41.6Wh 4cellbty	121500121	
4	Battery, 4S1P, 4cell, 41.6Wh,Simplo, Zx0 SP/L L12M4E21 14.8V41.6Wh 4cellbty	121500123	
5	AILZA MB UMA 37W	90004453	
5	AILZA MB UMA 47W	90004454	
5	AILZA MB N14P-GV2 1G	90004455	
5	AILZA MB N14P-GV2 2G	90004456	
5	AILZA MB W8S UMA 37W	90004457	
5	AILZA MB W8S UMA 47W	90004458	
5	AILZA MB W8S N14P-GV2 1G	90004459	
5	AILZA MB W8S N14P-GV2 2G	90004460	
5	AILZA MB W8P UMA 37W	90004461	
5	AILZA MB W8P UMA 47W	90004462	N
5	AILZA MB W8P N14P-GV2 1G	90004463	
5	AILZA MB W8P N14P-GV2 2G	90004464	
6	Processor, Intel Haswell platform 35w, Intel I7-4702MQ 2.2G 4cPGA CPU	102500541	
6	Processor, Intel Haswell platform 35w, Intel I7-4700MQ 2.4G 4cPGA CPU	102500540	
7	AILZA FAN	90203964	
8	AILZA Thermal DIS 37W	90203961	
8	AILZA Thermal UMA 37W	90203962	
8	AILZA Thermal UMA 37W	90203963	
9	ODD, 9.5 Rambo Tray-in, HLDS GU70N 9.5 Rambo ODD	25205807	
9	ODD, 9.5 Rambo Tray-in, PLDS DU-8A5SH 9.5 Rambo ODD	25205806	
9	ODD, 9.5 Rambo Tray-in, PSN UJ8DB Slim Tray Rambo w/o bezel	25212030	
9	ODD, 9.5 HLDS BU10N 9.5 BD Rambo ODD	25209260	
9	ODD, 9.5 Panasonic UJ262 9.5 BD Rambo ODD	25209259	
10	AILZA USB&Audio Board	90004452	

Table 5. Parts list—Overall (Z410) (continued)

No.	FRU	FRU no.	CRU ID.
11	RAM, DDR3 1600 2GB, Samsung, M471B5773DH0-YK0 2GB DDR3L 1600	11200502	N
11	RAM, DDR3 1600 2GB, SK hynix, HMT425S6AFR6A-PB 2GB DDR3L 1600	11201299	
11	RAM, DDR3 1600 2GB, Ramaxel, RMT3170ED58F8W-1600	11201835	
11	RAM, DDR3 1600 2GB, Micron, MT4KTF25664HZ-1G6E1 2GB DDR3L 1600	11201967	
11	RAM, DDR3L 1600 4GB, Samsung, M471B5173BH0-YK0 4GB DDR3L 1600	11201966	
11	RAM, DDR3L 1600 4GB, SK hynix, HMT451S6AFR8A-PB 4GB DDR3L 1600	11201300	
11	RAM, DDR3L 1600 4GB, Ramaxel, RMT3170EB68F9W-1600 4GB DDR3L 1600	11201512	
11	RAM, DDR3L 1600 4GB, Sharetronic, SM321NQ08ICF 4GB DDR3L 1600	11201834	
11	RAM, DDR3L 1600 4GB, Micron, MT8KTF51264HZ-1G6J1 4GB DDR3L 1600	11201342	
11	RAM, DDR3L 1600 8GB, Samsung, M471B1G73BH0-YK0 8GB DDR3L 1600	11200504	
11	RAM, DDR3L 1600 8GB, SK hynix, HMT41GS6AFR8A-PB 8GB DDR3L 1600	11201301	
11	RAM, DDR3L 1600 8GB, Sharetronic, SM322NW08IAF 8GB DDR3L 1600	11201514	
11	RAM, DDR3L 1600 8GB, Micron, MT16KTF1G64HZ-1G6E1 8GB DDR3L 1600	11201304	
12	WLAN, Intel 7260BN 2x2BN+BT PCIE HMC WLAN	20200412	
12	WLAN, Cbt BCM94313HMG 1x1BGN HMC	20200102	
12	WLAN, Liteon HB125 1x1BGN HMC	20200223	
12	WLAN, Cbt BCM943142HM 1x1BGN+BT4.0 HMC	20200222	
12	WLAN, Liteon WB225 1x1BGN+BT4.0 HMC	20200224	
12	WLAN, Liteon WB335 1x1BGN+BT4.0 HMC	20200437	
13	Hard disk drive, ST500LM012 6G 9.5mm 5.4K 500G HDD	16200387	
13	Hard disk drive, ST500LT012 6G 7mm 5.4K 500G HDD	16200383	
13	Hard disk drive, HTS545050A7E660 6G 7mm 5.4K 500G HDD	16200404	
13	Hard disk drive, MQ01ABF050 6G 7mm 5.4K 500G HDD	16200433	
13	Hard disk drive, WD5000LPCX-24C6HT0 6G 7mm 5.4K 500G HDD	16200395	

Table 5. Parts list—Overall (Z410) (continued)

No.	FRU	FRU no.	CRU ID.
13	Hard disk drive, ST1000LM024 6G 9.5mm 5.4K 1T HDD	16200385	N
13	Hard disk drive, HTS541010A9E660 6G 9.5mm 5.4K 1T HDD	16200400	
13	Hard disk drive, TSB MQ01ABD100 6G 9.5mm 5.4K 1T HDD	16200429	
13	Hard disk drive, WD10JPCX-24UE4T0 6G 9.5mm 5.4K 1T HDD	16200393	
13	Hard disk drive, ST1000LM014 6G 9.5mm 1T SSHD	16200389	
13	Hard disk drive, ST500LM000 6G 7mm 500G SSHD	16200391	
14	AILZA Speaker L+R	90203976	
15	AILZA Lower Case Brown	90203977	
15	AILZA Lower Case White	90203978	
—	AC adapter (see “AC adapters” on page 105).		

Z510/Z510 Touch

Table 6. Parts list—Overall (Z510/Z510 Touch)

No.	FRU	FRU no.	CRU ID.
a-h	See “Miscellaneous parts” on page 104.		
1	LCD unit (see “LCD FRUs” on page 93.)		
2	Keyboard (see “Keyboard” on page 98.)		
3	AILZB Upper Case	90203995	
3	AILZB Upper Case for Erazer	90203996	
4	Battery, 4S1P, 4cell, 48Wh, Sanyo, Z400Z500 SY L12S4K01 14.4V48Wh 4cellbty	121500113	
4	Battery, 4S1P, 4cell, 48Wh, Simplo, Zx10 SP/S L12M4F02 15V48Wh 4cellbty	121500202	
4	Battery, 4S1P, 4cell, 41.6Wh, Sanyo, Zx0 SY L12S4E21 14.4V41.6Wh 4cellbty	121500121	
4	Battery, 4S1P, 4cell, 41.6Wh, Simplo, Zx0 SP/L L12M4E21 14.8V41.6Wh 4cellbty	121500123	
5	AILZB MB UMA 37W	90004472	
5	AILZB MB UMA 47W	90004473	
5	AILZB MB N14P-GV2 1G	90004474	
5	AILZB MB N14P-GV2 2G	90004475	
5	AILZB MB W8S UMA 37W	90004476	
5	AILZB MB W8S UMA 47W	90004477	
5	AILZB MB W8S N14P-GV2 1G	90004478	
5	AILZB MB W8S N14P-GV2 2G	90004479	
5	AILZB MB W8P UMA 37W	90004480	
5	AILZB MB W8P UMA 47W	90004481	
5	AILZB MB W8P N14P-GV2 1G	90004482	N
5	AILZB MB W8P N14P-GV2 2G	90004483	
5	AILZC MB UMA 37W	90004867	
5	AILZC MB UMA 47W	90004868	
5	AILZC MB DIS 1G	90004869	
5	AILZC MB DIS 2G	90004870	
5	AILZC MB W8S UMA 37W	90004871	
5	AILZC MB W8S UMA 47W	90004872	
5	AILZC MB W8S DIS 1G	90004873	
5	AILZC MB W8S DIS 2G	90004874	
5	AILZC MB W8P UMA 37W	90004875	
5	AILZC MB W8P UMA 47W	90004876	
5	AILZC MB W8P DIS 1G	90004877	
5	AILZC MB W8P DIS 2G	90004878	
6	Processor, Intel Haswell platform 35w, Intel I7-4702MQ 2.2G 4cPGA CPU	102500541	
6	Processor, Intel Haswell platform 35w, Intel I7-4700MQ 2.4G 4cPGA CPU	102500540	
7	AILZA FAN	90203964	
8	AILZA Thermal DIS 37W	90203961	
8	AILZA Thermal UMA 37W	90203962	

Table 6. Parts list—Overall (Z510/Z510 Touch) (continued)

No.	FRU	FRU no.	CRU ID.
8	AILZA Thermal UMA 47W	90203963	N
9	ODD, 9.5 Rambo Tray-in, HLDS GU70N 9.5 Rambo ODD	25205807	
9	ODD, 9.5 Rambo Tray-in, PLDS DU-8A5SH 9.5 Rambo ODD	25205806	
9	ODD, 9.5 Rambo Tray-in, PSN UJ8DB Slim Tray Rambo w/o bezel	25212030	
9	ODD, 9.5 Blueray Rambo, HLDS BU10N 9.5 BD Rambo ODD	25209260	
9	ODD, 9.5 Blueray Rambo, Panasonic UJ262 9.5 BD Rambo ODD	25209259	
10	AILZB ODD Board W/BL	90004470	
10	AILZB ODD Board WO/BL	90004471	
11	AILZB USB&Audio Board	90004468	
12	AILZB LED Board	90004469	
13	RAM, DDR3L 1600 2GB, Samsung, SS M471B5773DH0-YK0 DDR3L 1600 2GB	11200502	
13	RAM, DDR3L 1600 2GB, SK hynix, HMT425S6AFR6A-PB 2GB DDR3L 1600	11201299	
13	RAM, DDR3L 1600 2GB, Ramaxel, RMT3170ED58F8W-1600	11201835	
13	RAM, DDR3L 1600 2GB, Micron, MT4KTF25664HZ-1G6E1 2GB DDR3L 1600	11201967	
13	RAM, DDR3L 1600 4GB, Samsung, M471B5173BH0-YK0 4GB DDR3L 1600	11201966	
13	RAM, DDR3L 1600 4GB, SK hynix, HMT451S6AFR8A-PB 4GB DDR3L 1600	11201300	
13	RAM, DDR3L 1600 4GB, Ramaxel, RMT3170EB68F9W-1600 4GB DDR3L 1600	11201512	
13	RAM, DDR3L 1600 4GB, Sharetronic, SM321NQ08ICF 4GB DDR3L 1600	11201834	
13	RAM, DDR3L 1600 4GB, Micron, MT8KTF51264HZ-1G6J1 4GB DDR3L 1600	11201342	
13	RAM, DDR3L 1600 8GB, Samsung, M471B1G73BH0-YK0 8GB DDR3L 1600	11200504	
13	RAM, DDR3L 1600 8GB, SK hynix, HMT41GS6AFR8A-PB 8GB DDR3L 1600	11201301	
13	RAM, DDR3L 1600 8GB, Sharetronic SM322NW08IAF 8GB DDR3L 1600	11201514	
13	RAM, DDR3L 1600 8GB, Micron, MT16KTF1G64HZ-1G6E1 8GB DDR3L 1600	11201304	
14	WLAN, WiFi 2x2 BGN+BT4.0, Intel, 7260BN 2x2BN+BT PCIE HMC WLAN	20200412	
14	WLAN, WiFi 1x1 BGN Cbt BCM94313HMG 1x1BGN HMC	20200102	
14	WLAN, WiFi 1x1 BG Liteon HB125 1x1BGN HMC	20200223	

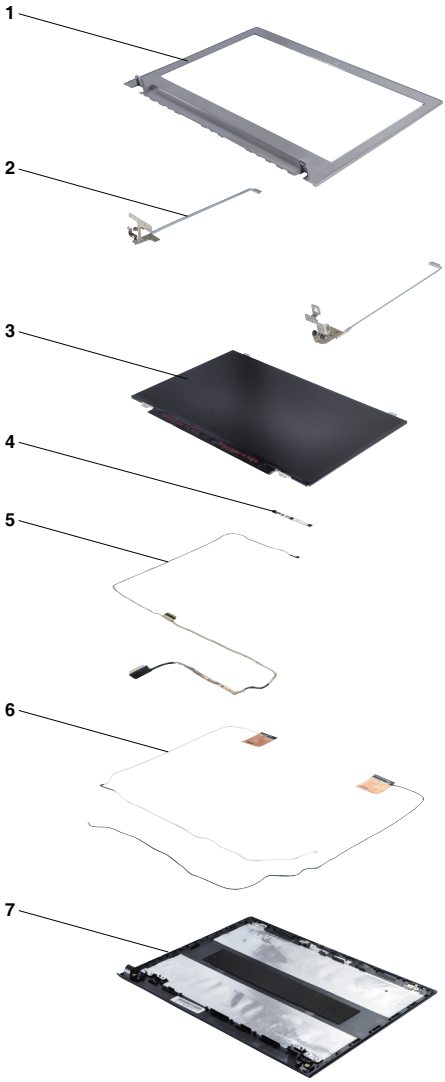
Table 6. Parts list—Overall (Z510/Z510 Touch) (continued)

No.	FRU	FRU no.	CRU ID.
14	WLAN, WiFi 1x1 BGN+BT4.0 Cbt BCM943142HM 1x1BGN+BT4.0 HMC	20200222	N
14	WLAN, WiFi 1x1 BGN+BT4.0 Liteon WB225 1x1BGN+BT4.0 HMC	20200224	
14	WLAN, WiFi 1x1 BGN+BT4.0 Liteon WB335 1x1BGN+BT4.0 HMC	20200437	
15	HDD/SSD 500G 5400rpm ST500LM012 6G 9.5mm 5.4K 500G HDD	16200387	
15	HDD/SSD 500G 5400rpm ST500LT012 6G 7mm 5.4K 500G HDD	16200383	
15	HDD/SSD 500G 5400rpm HTS545050A7E660 6G 7mm 5.4K 500G HDD	16200404	
15	HDD/SSD 500G 5400rpm MQ01ABF050 6G 7mm 5.4K 500G HDD	16200433	
15	HDD/SSD 500G 5400rpm WD5000LPCX-24C6HT0 6G 7mm 5.4K 500G HDD	16200395	
15	HDD/SSD 1TB 5400rpm ST1000LM024 6G 9.5mm 5.4K 1T HDD	16200385	
15	HDD/SSD 1TB 5400rpm HTS541010A9E660 6G 9.5mm 5.4K 1T HDD	16200400	
15	HDD/SSD 1TB 5400rpm TSB MQ01ABD100 6G 9.5mm 5.4K 1T HDD	16200429	
15	HDD/SSD 1TB 5400rpm WD10JPCX-24UE4T0 6G 9.5mm 5.4K 1T HDD	16200393	
15	HDD/SSD 1T Hybrid ST1000LM014 6G 9.5mm 1T SSHD	16200389	
15	HDD/SSD 500G Hybrid ST500LM000 6G 7mm 500G SSHD	16200391	
16	AILZB Speaker L+R	90204000	
17	AILZB Lower Case Brown	90204001	
17	AILZB Lower Case White	90204002	
—	AC adapter (see “AC adapters” on page 105).		

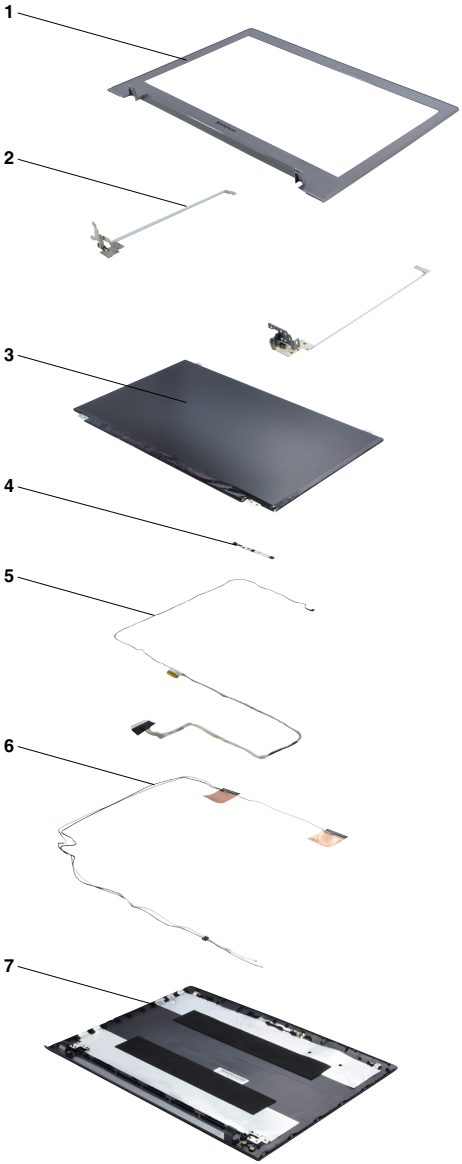
LCD FRUs

In Lenovo Z410/Z510/Z510 Touch, there are following types of LCDs.

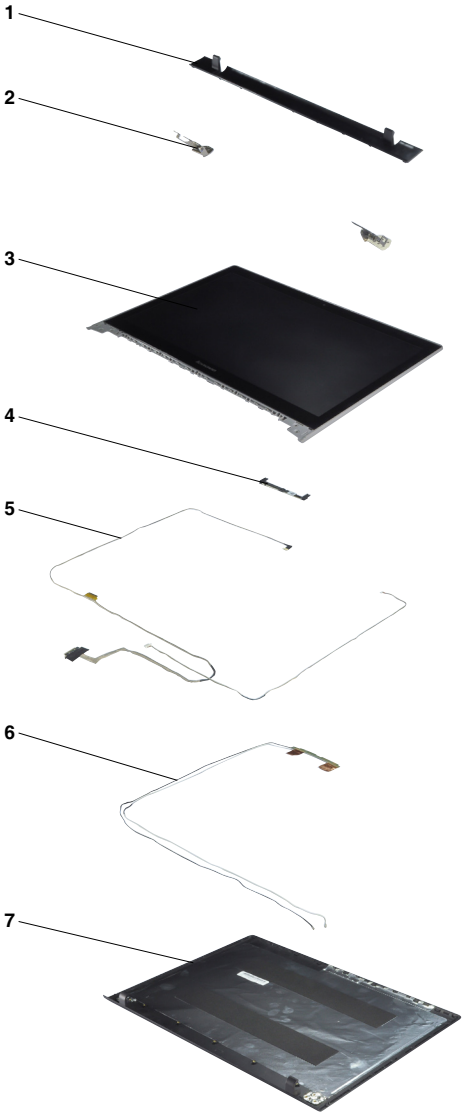
- “14-in. HD TFT”



- “15.6-in. HD TFT”



- “15.6-in. Touch HD TFT”



14-in. HD TFT

Table 7. Parts list—14-in. HD TFT

No.	FRU	FRU no.	CRU ID.
1	AILZA LCD Bezel	90203979	
2	AILZA Hinge W/LCD Bracket	90203980	
3	Panel, LGD LP140WH2-TPT1 HD AG F LED1 NB LCD	18200926	
3	Panel, AUO B140XTN03.3 3A HD AG F LED1 NB LCD	18200925	
3	Panel, SDC LTN140AT30-401 HD AG F LED1 NB LCD	18200927	
3	Panel, CMI N140BGE-E33 HD AG F LED1 NB LCD	18200928	
3	Panel, AUO B140RTN02.3 1A HD+ AG F LED1 NB LCD	18200932	
3	Panel, LGD LP140WD2 TPB1 HD+ AG F LED1 NB LCD	18200933	N
3	Panel, CMI N140FGE-E32 HD+ AG F LED1 NB LCD	18201073	
4	AILZA Camera 1M	90004465	
4	AILZA Camera 0.3M	90004466	
5	AILZA EDP Cable	90203981	
6	AILZA Antenna	90203982	
7	AILZA LCD Cover Brown	90203983	
7	AILZA LCD Cover White	90203984	

15.6-in. HD TFT

Table 8. Parts list—15.6-in. HD TFT

No.	FRU	FRU no.	CRU ID.
1	AILZB LCD Bezel	90204003	N
2	AILZB Hinge W/LCD Bracket	90204004	
3	Panel, HD-AG eDP1.2 3.2t,AUO B156XTN03.5 1A HD AG S LED1 LCD	18201045	
3	Panel, HD-AG eDP1.2 3.2t,LGD LP156WHU TPB1 HD AG S LED1 LCD	18201046	
3	Panel, HD-AG eDP1.2 3.2t,CMI N156BGE-EA1 HD AG S LED1 NB LCD	18201074	
3	Panel, HD-AG eDP1.2 3.2t,SDC LTN156AT33 401 HD AG S LED1 NB LCD	18201047	
3	Panel, FHD-S-AG eDP1.2 3.2t,AUO B156HTN03.4 1A FHD AG S LED1 NB LCD	18201064	
3	Panel, FHD-S-AG eDP1.2 3.2t,CMI N156HGE-EA1 FHD AG S LED1 NB LCD	18201065	
4	AILZA Camera 1M	90004465	
4	AILZA Camera 0.3M	90004466	
5	AILZB EDP Cable	90204005	
6	AILZB Antenna	90204006	
7	AILZB LCD Cover Brown	90204007	
7	AILZB LCD Cover White	90204008	

15.6-in. Touch HD TFT

Table 9. Parts list—15.6-in. Touch HD TFT

No.	FRU	FRU no.	CRU ID.
1	AILZC Hinge Cover	90204287	N
2	AILZC Hinge	90204288	
3	AILZC LCD Module HD AUO+LGD	90400224	
3	AILZC LCD Module HD AUO+CMI	90400225	
3	AILZC LCD Module HD AUO+SDC	90400226	
3	AILZC LCD Module HD AUO+AUO	90400227	
3	AILZC LCD Module FHD AUO+CMI	90400228	
3	AILZC LCD Module FHD AUO+AUO	90400229	
4	AILZC Camera 1M	90004879	
5	AILZC LCD Cable	90204289	
5	AILZC LCD touch Cable	90204290	
6	AILZC Antenna	90204291	
7	AILZC LCD Cover	90204292	

Keyboard

Z410

Table 10. Parts list—Keyboard (Z410)

Language			P/N	CRU ID.
Z410	Chicony	English	25211110	**
		U.K. English	25211111	
		Italian	25211112	
		Spanish	25211113	
		Turkish	25211114	
		Thai	25211115	
		Portuguese	25211116	
		Latin	25211117	
		Canadian Bilingual (En+Fr)	25211118	
		Korean	25211119	
		Traditional Chinese	25211120	
		Russian	25211121	
		French	25211122	
		German	25211123	
		Arabic	25211124	
		Brazilian	25211125	
		Japanese	25211126	
		Dutch	25211127	
		Greek	25211128	
		Hebrew	25211129	
		Hungarian	25211130	
		Nordic	25211131	
		Belgian	25211132	
		Icelandic	25211133	
		Slovenian	25211134	
		Swiss	25211135	
		US international	25211136	
		Czech&Slovak	25211137	
		Bulgarian	25211138	
		Indic	25211139	
	Sunrex	English	25211140	
		U.K. English	25211141	
		Italian	25211142	
		Spanish	25211143	
		Turkish	25211144	
		Thai	25211145	
		Portuguese	25211146	
		Latin	25211147	
		Canadian Bilingual (En+Fr)	25211148	
		Korean	25211149	
		Traditional Chinese	25211150	
		Russian	25211151	
		French	25211152	
		German	25211153	

Table 10. Parts list—Keyboard (Z410) (continued)

Language			P/N	CRU ID.
Z410 *(continued)*	Sunrex *(continued)*	Arabic	25211154	**
		Brazilian	25211155	
		Dutch	25211157	
		Greek	25211158	
		Hebrew	25211159	
		Hungarian	25211160	
		Four Nordic countries	25211161	
		Belgian	25211162	
		Icelandic	25211163	
		Slovenian	25211164	
		Swiss	25211165	
		International English	25211166	
		Czechoslovakian	25211167	
		Bulgarian	25211168	
		Indian	25211169	
	Darfon	U.S. English	25211170	
		U.K. English	25211171	
		Italian	25211172	
		Spanish	25211173	
		Turkish	25211174	
		Thai	25211175	
		Portuguese	25211176	
		Latin	25211177	
		Canadian English&French	25211178	
		Korean	25211179	
		Traditional Chinese	25211180	
		Russian	25211181	
		French	25211182	
		German	25211183	
		Arabic	25211184	
		Brazilian	25211185	
		Japanese	25211186	
		Dutch	25211187	
		Greek	25211188	
		Hebrew	25211189	
		Hungarian	25211190	
		Four Nordic countries	25211191	
		Belgian	25211192	
		Icelandic	25211193	
		Slovenian	25211194	
		Swiss	25211195	
		International English	25211196	
		Czechoslovakian	25211197	
		Bulgarian	25211198	
		Indian	25211199	

Z510/Z510 Touch

Table 11. Parts list—Keyboard (Z510/Z510 Touch)

Language			P/N	CRU ID.
Z510/Z510 Touch	Chicony	English	25213591	**
		U.K. English	25213592	
		Italian	25213593	
		Spanish	25213594	
		Turkish	25213595	
		Thai	25213596	
		Portuguese	25213597	
		Latin	25213598	
		Canadian Bilingual (En+Fr)	25213599	
		Korean	25213600	
		Traditional Chinese	25213601	
		Russian	25213602	
		French	25213603	
		German	25213604	
		Arabic	25213605	
		Brazilian	25213606	
		Japanese	25213607	
		Dutch	25213608	
		Greek	25213609	
		Hebrew	25213610	
		Hungarian	25213611	
		Nordic	25213612	
		Belgian	25213613	
		Icelandic	25213614	
		Slovenian	25213615	
		Swiss	25213616	
		US international	25213617	
		Czech&Slovak	25213618	
		Bulgarian	25213619	
		Indic	25213620	
	Chicony Backlight KB	English	25213721	
		U.K. English	25213722	
		English	25213723	
		Italian	25213724	
		Spanish	25213725	
		Turkish	25213726	
		Thai	25213727	
		Portuguese	25213728	
		Latin	25213729	
		Canadian Bilingual (En+Fr)	25213730	
		Korean	25213731	
		Traditional Chinese	25213732	
		Russian	25213733	
		French	25213734	
		German	25213735	

Table 11. Parts list—Keyboard (Z510/Z510 Touch) (continued)

Language			P/N	CRU ID.
Z510/Z510 Touch *(continued)*	Chicony Backlight KB *(continued)*	Arabic	25213736	**
		Brazilian	25213737	
		Japanese	25213738	
		Dutch	25213739	
		Greek	25213740	
		Hebrew	25213741	
		Hungarian	25213742	
		Nordic	25213743	
		Belgian	25213744	
		Icelandic	25213745	
		Slovenian	25213746	
		Swiss	25213747	
		US international	25213748	
		Czech&Slovak	25213749	
		Bulgarian	25213750	
		Indic	25213751	
	Sunrex Normal KB	English	25213621	
		U.K. English	25213622	
		Italian	25213623	
		Spanish	25213624	
		Turkish	25213625	
		Thai	25213626	
		Portuguese	25213627	
		Latin	25213628	
		Canadian Bilingual (En+Fr)	25213629	
		Korean	25213630	
		Traditional Chinese	25213631	
		Russian	25213632	
		French	25213633	
		German	25213634	
		Arabic	25213635	
		Brazilian	25213636	
		Dutch	25213638	
		Greek	25213639	
		Hebrew	25213640	
		Hungarian	25213641	
		Nordic	25213642	
		Belgian	25213643	
		Icelandic	25213644	
		Slovenian	25213645	
		Swiss	25213646	
		US international	25213647	
		Czech&Slovak	25213648	
		Bulgarian	25213649	
		Indic	25213650	

Table 11. Parts list—Keyboard (Z510/Z510 Touch) (continued)

Language			P/N	CRU ID.
Z510/Z510 Touch *(continued)*	Sunrex Backlight KB	English	25213752	**
		U.K. English	25213753	
		English	25213754	
		Italian	25213755	
		Spanish	25213756	
		Turkish	25213757	
		Thai	25213758	
		Portuguese	25213759	
		Latin	25213760	
		Canadian Bilingual (En+Fr)	25213761	
		Korean	25213762	
		Traditional Chinese	25213763	
		Russian	25213764	
		French	25213765	
		German	25213766	
		Arabic	25213767	
		Brazilian	25213768	
		Dutch	25213770	
		Greek	25213771	
		Hebrew	25213772	
		Hungarian	25213773	
		Nordic	25213774	
		Belgian	25213775	
		Icelandic	25213776	
		Slovenian	25213777	
		Swiss	25213778	
		US international	25213779	
		Czech&Slovak	25213780	
		Bulgarian	25213781	
		Indic	25213782	
	Darfon Normal KB	English	25213651	
		U.K. English	25213652	
		Italian	25213653	
		Spanish	25213654	
		Turkish	25213655	
		Thai	25213656	
		Portuguese	25213657	
		Latin	25213658	
		Canadian Bilingual (En+Fr)	25213659	
		Korean	25213660	
		Traditional Chinese	25213661	
		Russian	25213662	
		French	25213663	
		German	25213664	
		Arabic	25213665	
		Brazilian	25213666	

Table 11. Parts list—Keyboard (Z510/Z510 Touch) (continued)

Language			P/N	CRU ID.
Z510/Z510 Touch *(continued)*	Darfon Normal KB *(continued)*	Japanese	25213667	**
		Dutch	25213668	
		Greek	25213669	
		Hebrew	25213670	
		Hungarian	25213671	
		Nordic	25213672	
		Belgian	25213673	
		Icelandic	25213674	
		Slovenian	25213675	
		Swiss	25213676	
		US international	25213677	
		Czech&Slovak	25213678	
		Bulgarian	25213679	
		Indic	25213680	
	Darfon Backlight KB	English	25213681	
		U.K. English	25213682	
		Italian	25213683	
		Spanish	25213684	
		Turkish	25213685	
		Thai	25213686	
		Portuguese	25213687	
		Latin	25213688	
		Canadian Bilingual (En+Fr)	25213689	
		Korean	25213690	
		Traditional Chinese	25213691	
		Russian	25213692	
		French	25213693	
		German	25213694	
		Arabic	25213695	
		Brazilian	25213696	
		Japanese	25213697	
		Dutch	25213698	
		Greek	25213699	
		Hebrew	25213700	
		Hungarian	25213701	
		Nordic	25213702	
		Belgian	25213703	
		Icelandic	25213704	
		Slovenian	25213705	
		Swiss	25213706	
		US international	25213707	
		Czech&Slovak	25213708	
		Bulgarian	25213709	
		Indic	25213710	
		English	25213783	

Miscellaneous parts

Z410

Table 12. Parts list—Miscellaneous parts (Z410)

FRU	P/N	CRU ID.
System miscellaneous parts: • (*a*) AILZA ODD Bracket • (*b*) AILZA ODD Bezel Rambo Brown • (*b*) AILZA ODD Bezel Rambo White • (*b*) AILZA ODD Bezel BD Brown • (*b*) AILZA ODD Bezel BD White • (*c*) AILZA HDD Bracket • (*d*) AILZA Rubber Brown • (*d*) AILZA Rubber White • (*e*) AILZA RG45 Door Brown • (*e*) AILZA RG45 Door White	 90203960 90203956 90203957 90203958 90203959 90203955 90203965 90203966 90203967 90203968	N
Cable miscellaneous parts: • (*f*) AILZA TP Cable • (*g*) AILZA DC-IN Cable • (*h*) AILZA Power Board W/Cable • (*i*) AILZA USB Cable **Note:** Italicized letters in parentheses are references to the exploded view in “Overall” on page 85 .	 90203971 90203973 90004451 90203973	

Z510/Z510 Touch

Table 13. Parts list—Miscellaneous parts (Z510/Z510 Touch)

FRU	P/N	CRU ID.
System miscellaneous parts: • (*a*) AILZA ODD Bracket • (*b*) AILZA ODD Bezel Rambo Brown • (*b*) AILZA ODD Bezel Rambo White • (*b*) AILZA ODD Bezel BD Brown • (*b*) AILZA ODD Bezel BD White • (*c*) AILZA HDD Bracket • (*e*) AILZB RG45 Door Brown • (*e*) AILZB RG45 Door Brown	 90203960 90203956 90203957 90203958 90203959 90203955 90203993 90203994	N
Cable miscellaneous parts: • (*f*) AILZA TP Cable • (*g*) AILZA DC-IN Cable • (*h*) AILZA Power Board W/Cable **Note:** Italicized letters in parentheses are references to the exploded view in “Overall” on page 85 .	 90203997 90203974 90004467	

AC adapters

Table 14. Parts list—3-pin AC adapters

FRU	P/N	CRU ID.
65W, Delta ADLX65NDC3A 20V3.25A adapter	36200249	*
65W, Liteon ADLX65NLC3A 20V3.25A adapter	36200251	
65W, Chicony ADLX65NCC3A 20V3.25A adapter	36200253	
65W, Delta ADLX65NDC3B 20V3.25A adapter PPB	36200301	
65W, Liteon ADLX65NLC3B 20V3.25A adapter PPB	36200303	
90W, Delta ADLX90NDC3A 20V4.5A adapter	36200250	
90W, Liteon ADLX90NLC3A 20V4.5A adapter	36200252	
90W, Chicony ADLX90NCC3A 20V4.5A adapter	36200254	

Screws

Table 15. Parts list—screws

FRU	P/N	CRU ID.
AILZA Screw M M 2.5D 5.7+2L K 6.0D	90203985	N
AILZA Screw M M 3.0D 3.0L K 4.9D	90203986	
AILZA Screw M M 2 2.0D 2L K 7D	90203987	
AILZA Screw M M 2.0D 2.5L K 5D	90203988	
AILZA Screw M M 2D 1.5+3.4L K 3.5D 1T	90203989	
AILZA Screw M M 2.5D 3.0L K 5.5D	90203990	
AILZA Screw M M 2.5D 6.0L K 4.6D	90203991	
AILZA Screw M M 2D 7.4+4.6L K 3.5D 1T(Z410)	90203992	
AILZC SCREW M M 2.5D 4.5L K 5.5D(Z510/Z510 Touch)	90204293	
AILZC SCREW M M 2.5D 3.5L K 5.3D(Z510/Z510 Touch)	90204294	
AILZC SCREW M M 2D 2.5L K 4D 0.5T(Z510/Z510 Touch)	90204295	

Power cords

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

Table 16. Parts list—3-pin power cords

Region	P/N	CRU ID.
CCC • LINETEK PC323+RVV300/300+LS15 1m	145000600	*
Argentina • LINETEK LS15+H03VV-F+LP39 1m	145000599	
Danmark • LINETEK LS15+H03VV-F+LP-38 1m	145000598	
Switzerland • LINETEK LS15+H03VV-F+LP-37 1m	145000597	
Brazil • LINETEK LS15 H03VV-F LP26A 1m	145000596	
Israel • LINETEK LS15+H03VV-F+LP-41 1m	145000595	
UL • LINETEK LP-30B + SPT-2 + LS15 1m	145000594	
UK • LINETEK LP-61L+ H03VV-F+ LS15 1m	145000593	
Indian • LINETEK PE-361+ H05VV-F+ LS15 1m	145000592	
Italy • LINETEK LS15+H03VV-F+PE-336 1m	145000591	
Korea • LINETEK LS15+H05VV-F+LP-E04A 1m	145000590	
Australia • LINETEK LS15+H03VV-F+LP-23A 1m	145000589	
Taiwan • LINETEK LS15+VCTF+LP-53 1m	145000588	
Japan • LINETEK LS15+VCTF+LP-54 1m	145000587	
Africa • LINETEK LS15+H03VV-F+PE-364 1m	145000586	
CE • LINETEK LP-34+H03VV-F + LS15 1m	145000585	
CCC • Longwell LSG-31+RVV300/300+LS-18 1m	145000568	
Argentina • Longwell LP-24+H03VV-F+LS-18 1m	145000567	
Danmark • Longwell LP-40+H03VV-F+LS-18 1m	145000566	
Switzerland • Longwell LP-37+H03VV-F+LS-18 1m	145000565	

Table 16. Parts list—3-pin power cords (continued)

Region	P/N	CRU ID.
Brazil • Longwell LP-46+H03VV-F+LS-18 1m	145000564	*
Israel • Longwell LP-41+H03VV-F+LS-18 1m	145000563	
UL • Longwell LP-30B+SPT-2 18AWG+LS-18 1m	145000562	
UK • Longwell LP-61L+H03VV-F+LS-18 1m	145000561	
Indian • Longwell LP-67+BIS+LS-18 1m	145000560	
Italy • Longwell LP-22+H03VV-F+LS-18 1m	145000559	
Korea • Longwell LP-486+KTLH03VV-F+LS-5 1m	145000558	
Australia • Longwell LP-23A+LFC-3R+LS-18 1m	145000557	
Taiwan • Longwell LP-71+VCTF+LS-33 1m	145000556	
Japan • Longwell LP-54+VCTF+LS-18 1m	145000555	
Africa • Longwell LP-39+H03VV-F+LS-18 1m	145000554	
CE • Longwell LP-34A+H03VV-F+LS-18 1m	145000553	
CCC • VOLEX GB10S3+RVV 300/500+VAC5S 1m	145000538	
UL • Volex US15S3+SPT-2+VAC5S 1m	145000537	
UK • VOLEX MP5004+H03VV-F+VAC5S 1m	145000605	
Indian • VOLEX IA6A3+IS694+VAC5S 1m	145000536	
Switzerland • VOLEX MP232+H03VV-F+VAC5S 1m	145000524	
Italy • VOLEX IT10S3+HO3VV-F+VAC5S 1m	145000535	
Denmark • VOLEX MP233D+H03VV-F+VAC5S 1m	145000534	
Korea • VOLEX M2511+KETI IEC+VAC5S 1m	145000533	
Australia • VOLEX AU10S3+H03VV-F+VAC5S 1m	145000532	
Taiwan • VOLEX TW15CS3+VCTF+VAC5S 1m	145000531	

Table 16. Parts list—3-pin power cords (continued)

Region	P/N	CRU ID.
Japan • VOLEX VAC5S+VCTF+M755 1m	145000530	
Argentina • VOLEX VA2073+H03VV-F+VAC5S 1m	145000528	
Brazil • VOLEX CH10S3+H03VV-F+VAC5S 1m	145000527	
Israel • VOLEX SI16S3+H03VV-F+VAC5S 1m	145000526	
CE • VOLEX M2511+HO3VV-F+VAC5S 1m	145000525	
UK • lux 0031+H03VV-F 0.75/3C+0011 1m	145500000	
Europe • lux 0033+H03VV-F 0.75/3C+0011 1m	145500001	
US • lux 0014+SPT-2 60ºC 18/3C+0016 1m	145500002	
China • lux 0036+RVV 300/300 0.75/3C+0002 1m	145500003	
Indian • lux 0046+IS694 0.75/3C+0011 1m	145500004	
Japan • lux 0018(E)+VCTF 0.75/3C+0021 1m	145500005	*
Australia • lux 0038+H03VV-F 0.75/3C+0011 1m	145500006	
Taiwan • lux 0019+VCTF 0.75/3C+0021 1m	145500007	
Korea • lux 0033+H03VV-F 0.75/3C+0011 1m	145500008	
Italy • lux 0029+H03VV-F 0.75/3C+0011 1m	145500009	
South Africa • lux 0044+H03VV-F 0.75/3C+0011 1m	145500010	
Brazil • lux 0034+H03VV-F 0.75/3C+0011 1m	145500011	
Israel • lux 0041+H03VV-F 0.75/3C+0011 1m	145500012	
Switzerland • lux 0027+H03VV-F 0.75/3C+0011 1m	145500013	
Denmark • lux 0048+H03VV-F 0.75/3C+0011 1m	145500014	
Argentina • lux 0040+H03VV-F 0.75/3C+0011 1m	145500015	

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