

**ThinkPad**

# User Guide

ThinkPad 11e Chromebook and ThinkPad Yoga 11e Chromebook

**Note:** Before using this information and the product it supports, be sure to read and understand the following:

- *Safety, Warranty, and Setup Guide*
- *Regulatory Notice*
- “Important safety information” on page iv
- Appendix E “Notices” on page 61

The latest *Safety, Warranty, and Setup Guide* and the *Regulatory Notice* are available on the Lenovo® Support Web site at:

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

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## Read this first

Be sure to follow the important tips given here to get the most use and enjoyment out of your computer. Failure to do so might lead to discomfort or injury, or cause your computer to fail.

### Protect yourself from the heat that your computer generates.



When your computer is turned on or the battery is charging, the base, the palm rest, and some other parts may become hot. The temperature they reach depends on the amount of system activity and the level of charge in the battery.

Extended contact with your body, even through clothing, could cause discomfort or even a skin burn.

- Avoid keeping your hands, your lap, or any other part of your body in contact with a hot section of the computer for any extended time.
- Periodically take hands from using the keyboard by lifting your hands from the palm rest.

### Protect yourself from the heat generated by the ac power adapter.



When the ac power adapter is connected to an electrical outlet and your computer, it generates heat.

Extended contact with your body, even through clothing, may cause a skin burn.

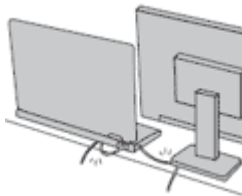
- Do not place the ac power adapter in contact with any part of your body while it is in use.
- Never use it to warm your body.

### Prevent your computer from getting wet.



To avoid spills and the danger of electrical shock, keep liquids away from your computer.

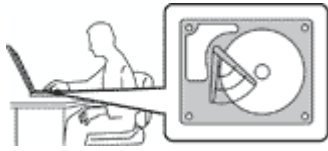
### Protect the cables from being damaged.



Applying strong force to cables may damage or break them.

Route communication lines, or the cables of an ac power adapter, a mouse, a keyboard, a printer, or any other electronic device, so that they cannot be walked on, tripped over, pinched by your computer or other objects, or in any way subjected to treatment that could interfere with the operation of your computer.

### Protect your computer and data when moving it.



Before moving a computer equipped with a hard disk drive or solid-state drive, do one of the following:

- Turn the computer off.
- Put the computer in sleep mode.

This will help to prevent damage to the computer, and possible loss of data.

### Handle your computer gently.



Do not drop, bump, scratch, twist, hit, vibrate, push, or place heavy objects on your computer, display, or external devices.

### Carry your computer carefully.



- Use a quality carrying case that provides adequate cushioning and protection.
- Do not pack your computer in a tightly packed suitcase or bag.
- Before putting your computer in a carrying case, make sure that it is off or in sleep mode. Do not put a computer in a carrying case while it is turned on.

## Important safety information

**Note:** Read the important safety information first.

This information can help you safely use your notebook computer. Follow and retain all information included with your computer. The information in this document does not alter the terms of your purchase agreement or the Lenovo Limited Warranty. For more information, see “Warranty Information” in the *Safety, Warranty, and Setup Guide* that comes with your computer.

Customer safety is important. Our products are developed to be safe and effective. However, personal computers are electronic devices. Power cords, power adapters, and other features can create potential safety risks that can result in physical injury or property damage, especially if misused. To reduce these risks, follow the instructions included with your product, observe all warnings on the product and in the operating instructions, and review the information included in this document carefully. By carefully following the information contained in this document and provided with your product, you can help protect yourself from hazards and create a safer computer work environment.

**Note:** This information includes references to power adapters and batteries. In addition to notebook computers, some products (such as speakers and monitors) ship with external power adapters. If you have such a product, this information applies to your product. In addition, computer products contain a coin-sized internal battery that provides power to the system clock even when the computer is unplugged, so the battery safety information applies to all computer products.

## Conditions that require immediate action

Products can become damaged due to misuse or neglect. Some product damage is serious enough that the product should not be used again until it has been inspected and, if necessary, repaired by an authorized servicer.

As with any electronic device, pay close attention to the product when it is turned on. On very rare occasions, you might notice an odor or see a puff of smoke or sparks vent from your product. Or you might hear sounds like popping, cracking or hissing. These conditions might merely mean that an internal electronic component has failed in a safe and controlled manner. Or, they might indicate a potential safety issue. However, do not take risks or attempt to diagnose the situation yourself. Contact the Customer Support Center for further guidance. For a list of Service and Support phone numbers, see the following Web site:  
<http://www.lenovo.com/support/phone>

Frequently inspect your computer and its components for damage or wear or signs of danger. If you have any question about the condition of a component, do not use the product. Contact the Customer Support Center or the product manufacturer for instructions on how to inspect the product and have it repaired, if necessary.

In the unlikely event that you notice any of the following conditions, or if you have any safety concerns with your product, stop using the product and unplug it from the power source and telecommunication lines until you can speak to the Customer Support Center for further guidance.

- Power cords, plugs, power adapters, extension cords, surge protectors, or power supplies that are cracked, broken, or damaged.
- Signs of overheating, smoke, sparks, or fire.
- Damage to a battery (such as cracks, dents, or creases), discharge from a battery, or a buildup of foreign substances on the battery.
- A cracking, hissing or popping sound, or strong odor that comes from the product.
- Signs that liquid has been spilled or an object has fallen onto the computer product, the power cord or power adapter.
- The computer product, power cord, or power adapter has been exposed to water.
- The product has been dropped or damaged in any way.
- The product does not operate normally when you follow the operating instructions.

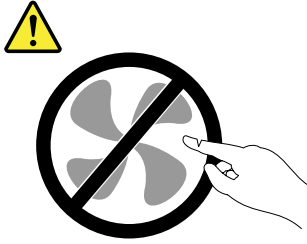
**Note:** If you notice these conditions with a product (such as an extension cord) that is not manufactured for or by Lenovo, stop using that product until you can contact the product manufacturer for further instructions, or until you get a suitable replacement.

## Service and upgrades

Do not attempt to service a product yourself unless instructed to do so by the Customer Support Center or your documentation. Only use a Service Provider who is approved to repair your particular product.

**Note:** Some computer parts can be upgraded or replaced by the customer. Upgrades typically are referred to as options. Replacement parts approved for customer installation are referred to as Customer Replaceable Units, or CRUs. Lenovo provides documentation with instructions when it is appropriate for customers to install options or replace CRUs. You must closely follow all instructions when installing or replacing parts. Before you remove the covers from a product equipped with a power cord, always make sure that the power is turned off and that the product is unplugged from any power source. If you have any questions or concerns, contact the Customer Support Center.

Although there are no moving parts in your computer after the power cord has been disconnected, the following warnings are required for your safety.



**CAUTION:**  
Hazardous moving parts. Keep fingers and other body parts away.

**CAUTION:**



Before you open the computer cover, turn off the computer and wait several minutes until the computer is cool.

## Power cords and power adapters



Use only the power cords and power adapters supplied by the product manufacturer.

The power cords shall be safety approved. For Germany, it shall be H05VV-F, 3G, 0.75 mm<sup>2</sup>, or better. For other countries, the suitable types shall be used accordingly.

Never wrap a power cord around a power adapter or other object. Doing so can stress the cord in ways that can cause the cord to fray, crack, or crimp. This can present a safety hazard.

Always route power cords so that they will not be walked on, tripped over, or pinched by objects.

Protect power cords and power adapters from liquids. For instance, do not leave your power cord or power adapter near sinks, tubs, toilets, or on floors that are cleaned with liquid cleansers. Liquids can cause a short circuit, particularly if the power cord or power adapter has been stressed by misuse. Liquids also can cause gradual corrosion of power cord terminals and/or the connector terminals on a power adapter, which can eventually result in overheating.

Ensure that all power cord connectors are securely and completely plugged into receptacles.

Do not use any power adapter that shows corrosion at the ac input pins or shows signs of overheating (such as deformed plastic) at the ac input pins or anywhere on the power adapter.

Do not use any power cords where the electrical contacts on either end show signs of corrosion or overheating or where the power cord appears to have been damaged in any way.

To prevent possible overheating, do not cover the power adapter with clothing or other objects when the power adapter is plugged into an electrical outlet.



## Extension cords and related devices

Ensure that extension cords, surge protectors, uninterruptible power supplies, and power strips that you use are rated to handle the electrical requirements of the product. Never overload these devices. If power strips are used, the load should not exceed the power strip input rating. Consult an electrician for more information if you have questions about power loads, power requirements, and input ratings.

## Plugs and outlets



If a receptacle (power outlet) that you intend to use with your computer equipment appears to be damaged or corroded, do not use the outlet until it is replaced by a qualified electrician.

Do not bend or modify the plug. If the plug is damaged, contact the manufacturer to obtain a replacement.

Do not share an electrical outlet with other home or commercial appliances that draw large amounts of electricity; otherwise, unstable voltage might damage your computer, data, or attached devices.

Some products are equipped with a three-pronged plug. This plug fits only into a grounded electrical outlet. This is a safety feature. Do not defeat this safety feature by trying to insert it into a non-grounded outlet. If you cannot insert the plug into the outlet, contact an electrician for an approved outlet adapter or to replace the outlet with one that enables this safety feature. Never overload an electrical outlet. The overall system load should not exceed 80 percent of the branch circuit rating. Consult an electrician for more information if you have questions about power loads and branch circuit ratings.

Be sure that the power outlet you are using is properly wired, easily accessible, and located close to the equipment. Do not fully extend power cords in a way that will stress the cords.

Be sure that the power outlet provides the correct voltage and current for the product you are installing.

Carefully connect and disconnect the equipment from the electrical outlet.

## Power supply statement



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



Hazardous voltage, current, and energy levels are present inside any component that has this label attached. There are no serviceable parts inside these components. If you suspect a problem with one of these parts, contact a service technician.

## External devices

### CAUTION:

Do not connect or disconnect any external device cables other than USB and 1394 cables while the computer power is on; otherwise, you might damage your computer. To avoid possible damage to attached devices, wait at least five seconds after the computer is shut down to disconnect external devices.

## General battery notice



Personal computers manufactured by Lenovo contain a coin-cell battery to provide power to the system clock. In addition, many mobile products, such as notebook computers, utilize a rechargeable battery pack to provide system power when in portable mode. Batteries supplied by Lenovo for use with your product have been tested for compatibility and should only be replaced with approved parts.

Never attempt to open or service any battery. Do not crush, puncture, or incinerate batteries or short circuit the metal contacts. Do not expose the battery to water or other liquids. Only recharge the battery pack strictly according to instructions included in the product documentation.

Battery abuse or mishandling can cause the battery to overheat, which can cause gasses or flame to “vent” from the battery pack or coin cell. If your battery is damaged, or if you notice any discharge from your battery or the buildup of foreign materials on the battery leads, stop using the battery and obtain a replacement from the battery manufacturer.

Batteries can degrade when they are left unused for long periods of time. For some rechargeable batteries (particularly Lithium Ion batteries), leaving a battery unused in a discharged state could increase the risk of a battery short circuit, which could shorten the life of the battery and also can pose a safety hazard. Do not let rechargeable Lithium-Ion batteries completely discharge or store these batteries in a discharged state.

## Notice for built-in rechargeable batteries



Do not attempt to replace the built-in rechargeable batteries. Contact Lenovo Support for factory replacement.

## Heat and product ventilation



Computers, ac power adapters, and many accessories can generate heat when turned on and when batteries are charging. Notebook computers can generate a significant amount of heat due to their compact size. Always follow these basic precautions:

- When your computer is turned on or the battery is charging, the base, the palm rest, and some other parts may become hot. Avoid keeping your hands, your lap, or any other part of your body in contact with a hot section of the computer for any extended length of time. When you use the keyboard, avoid keeping your palms on the palm rest for a prolonged period of time. Your computer generates some heat during normal operation. The amount of heat depends on

the amount of system activity and the battery charge level. Extended contact with your body, even through clothing, could cause discomfort or even a skin burn. Periodically take breaks from using the keyboard by lifting your hands from the palm rest; and be careful not to use the keyboard for any extended length of time.

- Do not operate your computer or charge the battery near flammable materials or in explosive environments.
- Ventilation slots, fans and/or heat sinks are provided with the product for safety, comfort, and reliable operation. These features might inadvertently become blocked by placing the product on a bed, sofa, carpet, or other flexible surface. Never block, cover, or disable these features.
- When the ac power adapter is connected to an electrical outlet and your computer, it generates heat. Do not place the adapter in contact with any part of your body while using it. Never use the ac power adapter to warm your body. Extended contact with your body, even through clothing, may cause a skin burn.

For your safety, always follow these basic precautions with your computer:

- Keep the cover closed whenever the computer is plugged in.
- Regularly inspect the outside of the computer for dust accumulation.
- Remove dust from vents and any perforations in the bezel. More frequent cleanings might be required for computers in dusty or high-traffic areas.
- Do not restrict or block any ventilation openings.
- Do not operate your computer inside furniture, as this might increase the risk of overheating.
- Airflow temperatures into the computer should not exceed 35°C (95°F).

## Electrical current safety information



**DANGER**

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

To avoid a shock hazard:

- Do not use your computer during a lightning storm.
- Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.
- Connect all power cords to a properly wired and grounded electrical outlet.
- Connect to properly wired outlets any equipment that will be attached to this product.
- Whenever possible, use one hand only to connect or disconnect signal cables.
- Never turn on any equipment when there is evidence of fire, water, or structural damage.
- Disconnect the attached power cords and all the cables before you open the device covers, unless instructed otherwise in the installation and configuration procedures.
- Do not use your computer until all internal parts enclosures are fastened into place. Never use the computer when internal parts and circuits are exposed.



**Connect and disconnect cables as described in the following procedures when installing, moving, or opening covers on this product or attached devices.**

**To connect:**

1. Turn everything OFF.
2. First, attach all cables to devices.
3. Attach signal cables to connectors.
4. Attach power cords to outlets.
5. Turn devices ON.

**To disconnect:**

1. Turn everything OFF.
2. First, remove power cords from outlets.
3. Remove signal cables from connectors.
4. Remove all cables from devices.

**The power cord must be disconnected from the wall outlet or receptacle before installing all other electrical cables connected to the computer.**

**The power cord may be reconnected to the wall outlet or receptacle only after all other electrical cables have been connected to the computer.**

## Liquid crystal display (LCD) notice

**CAUTION:**

The liquid crystal display (LCD) is made of glass, and rough handling or dropping the computer can cause the LCD to break. If the LCD breaks and the internal fluid gets into your eyes or on your hands, immediately wash the affected areas with water for at least 15 minutes; if any symptoms are present after washing, get medical care.

**Note:** For products with mercury-containing fluorescent lamps (for example, non-LED), the fluorescent lamp in the Liquid crystal display (LCD) contains mercury; dispose of according to local, state, or federal laws.

## Using headphones or earphones

**CAUTION:**

**Excessive sound pressure from earphones and headphones can cause hearing loss. Adjustment of the equalizer to maximum increases the earphone and headphone output voltage and the sound pressure level. Therefore, to protect your hearing, adjust the equalizer to an appropriate level.**

Excessive use of headphones or earphones for a long period of time at high volume can be dangerous if the output of the headphone or earphone connectors do not comply with specifications of EN 50332-2. The headphone output connector of your computer complies with EN 50332-2 Sub clause 7. This specification limits the computer's maximum wide band true RMS output voltage to 150 mV. To help protect against hearing loss, ensure that the headphones or earphones you use also comply with EN 50332-2 (Clause 7 limits) for a wide band characteristic voltage of 75 mV. Using headphones that do not comply with EN 50332-2 can be dangerous due to excessive sound pressure levels.

If your Lenovo computer came with headphones or earphones in the package, as a set, the combination of the headphones or earphones and the computer already complies with the specifications of EN 50332-1. If different headphones or earphones are used, ensure that they comply with EN 50332-1 (Clause 6.5 Limitation Values). Using headphones that do not comply with EN 50332-1 can be dangerous due to excessive sound pressure levels.

## Additional safety information

### Plastic bag notice



**DANGER**

**Plastic bags can be dangerous. Keep plastic bags away from babies and children to avoid danger of suffocation.**

### Polyvinyl Chloride (PVC) cable and cord notice

Many personal computer products and accessories contain cords, cables or wires, such as power cords or cords to connect the accessory to a personal computer. If this product has such a cord, cable or wire, then the following warning applies:

**WARNING:** Handling the cord on this product or cords associated with accessories sold with this product will expose you to lead, a chemical known to the State of California to cause cancer, and birth defects or other reproductive harm. ***Wash hands after handling.***



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## Chapter 1. Product overview

This chapter provides information about the locations of connectors, locations of important product labels, computer features, specifications, and preinstalled programs.

This chapter contains the following topics:

- “Locating computer controls, connectors, and indicators” on page 1
- “Features” on page 8
- “Specifications” on page 9

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### Locating computer controls, connectors, and indicators

This topic introduces the computer hardware features to give you the basic information that you need to start using the computer.

#### Front view

##### Front view of the ThinkPad 11e Chromebook



<b>1</b> Microphone	<b>2</b> Camera-in-use indicator
<b>3</b> Camera	<b>4</b> Speakers
<b>5</b> System-status indicator	<b>6</b> Touch pad

#### **1** Microphone

The microphone captures sound and voice when used with a program capable of handling audio.

#### **2** Camera-in-use indicator

When the camera is started, the camera-in-use indicator turns on in green.

### 3 Camera

Use the camera to take pictures or hold a video conference. For more information, see “Using the camera” on page 25.

### 4 Speakers

Your computer is equipped with a pair of stereo speakers.

### 5 System-status indicator

The illuminated dot in the ThinkPad® logo on the palm rest functions as a system-status indicator. For more information, see “Status indicators” on page 6.

### 6 Touch pad

Your computer is equipped with a touch pad under the bottom edge of the keyboard. The touch pad enables you to move the pointer and perform click actions, without the use of a conventional mouse. For more information, see “Using the touch pad” on page 13.

### Front view of the ThinkPad Yoga® 11e Chromebook



<b>1</b> Microphone	<b>2</b> Camera-in-use indicator
<b>3</b> Camera	<b>4</b> Speakers
<b>5</b> System-status indicator	<b>6</b> Touch pad
<b>7</b> Multi-touch screen	

### 1 Microphone

The microphone captures sound and voice when used with a program capable of handling audio.

### 2 Camera-in-use indicator

When the camera is started, the camera-in-use indicator turns on in green.



### 3 Camera

Use the camera to take pictures or hold a video conference. For more information, see “Using the camera” on page 25.

### 4 Speakers

Your computer is equipped with a pair of stereo speakers.

### 5 System-status indicator

The illuminated dot in the ThinkPad logo on the palm rest functions as a system-status indicator. For more information, see “Status indicators” on page 6.

### 6 Touch pad

Your computer is equipped with a touch pad under the bottom edge of the keyboard. The touch pad enables you to move the pointer and perform click actions, without the use of a conventional mouse. For more information, see “Using the touch pad” on page 13.

### 7 Multi-touch screen

For the ThinkPad Yoga 11e Chromebook, a multi-touch screen is equipped. For more information, see “Using the multi-touch screen” on page 19.

## Right-side view

**Note:** Your computer might look slightly different from the illustration in this topic.





<b>1</b> Power button	<b>2</b> Volume-control buttons
<b>3</b> USB 3.0 connector	<b>4</b> HDMI™ connector
<b>5</b> Security-lock slot	

### 1 Power button



Use the power button to turn on the computer.



To turn off the computer, do the following depending on your computer model and status:

- **For models without multi-touch screen:**

- If you are not logged in, click the power icon  on the lower-left corner of the screen.
- If you are logged in, click the battery status icon on the lower-right corner of the screen, and then click the power icon .

- **For models with multi-touch screen:**

- If you are not logged in, touch or click the power icon  on the lower-left corner of the screen.
- If you are logged in, touch or click the battery status icon on the lower-right corner of the screen, and then touch or click the power icon .

If your computer stops responding and you cannot turn it off, press and hold the power button for about eight seconds to turn off the computer. If the computer still is not responding, press the Refresh key  and the power button  at the same time to turn off the computer.

## **2** Volume-control buttons

Use the volume-control buttons to adjust the volume.

## **3** USB 3.0 connector

The Universal Serial Bus (USB) 3.0 connector is used for connecting devices compatible with a USB interface, such as a USB keyboard or a USB mouse.

**Attention:** When you connect a USB cable to this connector, ensure that the USB mark is facing upward. Otherwise the connector might get damaged.

## **4** HDMI connector

Your computer has a High-Definition Multimedia Interface (HDMI) connector. This connector can connect a compatible digital audio device or video monitor, such as a high-definition television (HDTV). You also can connect your computer to a compatible video graphics array (VGA) video device, such as a VGA monitor, by using an HDMI-to-VGA monitor cable.

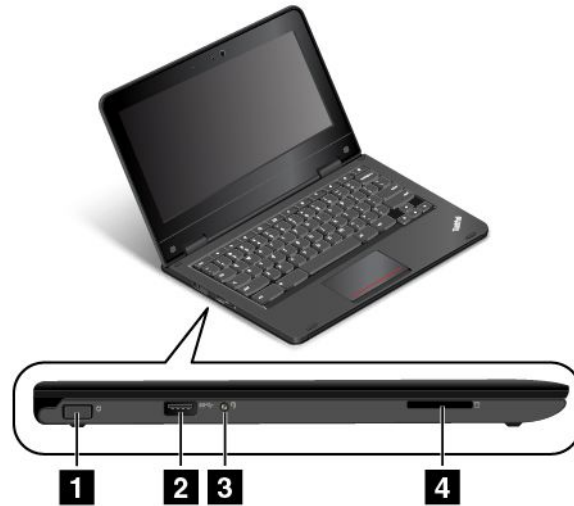
## **5** Security-lock slot

To protect your computer from theft, you can purchase a security cable lock that fits the security-lock slot to lock the computer to a stationary object.

**Note:** You are responsible for evaluating, selecting, and implementing the locking device and security feature. Lenovo makes no comments, judgments, or warranties about the function, quality, or performance of the locking device and security feature.

## Left-side view

**Note:** Your computer might look slightly different from the illustration in this topic.



<b>1</b> Power connector	<b>2</b> Always On USB connector (USB 2.0 connector)
<b>3</b> Audio connector	<b>4</b> Media card slot

### **1** Power connector

Connect the ac power adapter to the power connector to provide ac power to the computer and charge the battery.

### **2** Always On USB connector (USB 2.0 connector)

By default, the Always On USB connector enables you to charge some mobile digital devices and smartphones when your computer is on or in sleep mode.

### **3** Audio connector

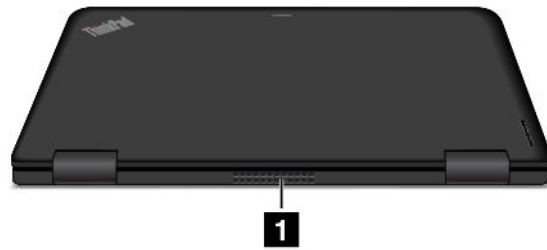
Connect headphones or a headset that has a 3.5-mm (0.14-inch), 4-pole plug to the audio connector to listen to the sound from the computer.

**Note:** If you are using a headset with a function switch, the audio connector might not fully support the function switch.

### **4** Media card slot

Your computer has a media card slot. Insert your flash media card into this slot to read the data on the card. For more information about the supported cards, see “Using a flash media card” on page 25.

## Rear view



### 1 Fan louvers

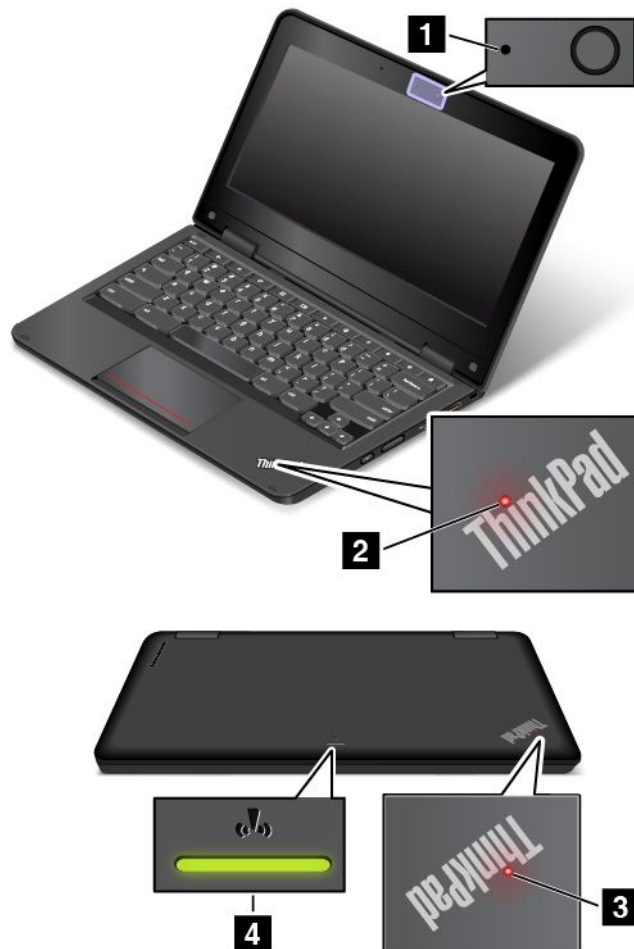
The fan louvers and internal fan enable air to circulate in the computer, which in turn ensures proper cooling, especially the cooling of the microprocessor.

**Note:** To ensure proper airflow, do not place any obstacles in front of the fan louvers.

## Status indicators

The status indicators show the status of your computer.

**Note:** Your computer might look slightly different from the illustrations in this topic.



### 1 Camera-in-use indicator

When the camera is started, the camera-in-use indicator turns on in green.

## 2 3 System-status indicators

There are two ThinkPad logos on your computer, one on the palm rest and the other on the outer lid. The illuminated dot in each ThinkPad logo works as a system-status indicator and helps you identify the status of your computer.

- **Solid on:** The computer is on (in normal use).
- **Blinks slowly:** The computer is in sleep mode.
- **Blinks for three times:** The computer is initially connected to power.
- **Off:** The computer is off.

## 4 Wireless-status indicator

The wireless-status indicator is located on the outer lid of the computer.

- **On** The wireless features of the computer are on.
- **Off:** The wireless features of the computer are off.

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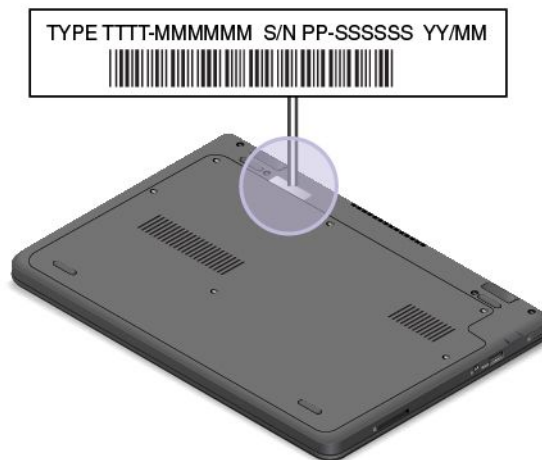
## Locating important product information

This section provides information to help you locate the machine type and model label, and FCC ID and IC Certification information.

### Machine type and model label

The machine type and model label identifies your computer. When you contact Lenovo for help, the machine type and model information helps support technicians to identify your computer and provide faster service.

The following illustration shows the location of the machine type and model of your computer.



## FCC ID and IC Certification information

You can find the FCC ID and IC Certification numbers for the wireless communication cards on the bottom of your computer as shown below.



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## Features

This topic provides general information about the computer features for various models. Depending on your specific model, some features might vary or unavailable.

### Processor

Intel® Celeron™ processor

### Memory

Double data rate 3 low voltage synchronous dynamic random access memory (DDR3 LV SDRAM)

### Battery

Built-in Lithium-ion (Li-ion) battery

### Internal storage

Embedded MultiMediaCard (eMMC)

### Display

- Size: 11.6 inches (294.64 mm)
- Resolution:
  - LCD: Up to 1366 x 768
  - External monitor: Up to 1920 x 1080 (HDMI)
- Color display with the thin-film transistor (TFT) technology
- Brightness control
- Integrated camera

### Power source (ac power adapter)

- Sine-wave input at 50-60 Hz
- Input rating of the ac power adapter: 100-240 V ac, 50-60 Hz

## Keyboard

- 6-row keyboard
- Touch pad
- Function keys

## Interface

- One audio connector
- One HDMI connector
- One USB 3.0 connector
- One Always On USB connector
- One 4-in-1 digital media-card-reader slot

## Wireless features

- Integrated wireless LAN
- Integrated Bluetooth

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## Specifications

This topic lists the physical specifications for your computer.

### Dimensions

- Width: 300 mm (11.81 inches)
- Depth: 216 mm (8.50 inches)
- Height:
  - ThinkPad 11e Chromebook: 22.30 mm (0.88 inch)
  - ThinkPad Yoga 11e Chromebook: 22.90 mm (0.90 inch)

### Environment

- Maximum altitude without pressurization: 3048 m (10 000 ft)
- Temperature
  - At altitudes up to 2438 m (8000 ft)
    - Operating: From 5.0°C (41°F) to 35.0°C (95°F)
    - Storage: From 5.0°C (41°F) to 43.0°C (109°F)
  - At altitudes above 2438 m (8000 ft)
    - Maximum temperature when operating under the unpressurized condition: 31.3°C (88°F)

**Note:** When you charge the battery, the battery temperature must be at least 10°C (50°F).

- Relative humidity:
  - Operating: From 8% to 80%
  - Storage: From 5% to 95%

### Heat output

- 45 W (154 Btu/hr) maximum

## Attention:

- Keep your computer away from electrical appliances such as an air conditioner, an electric fan, a microwave oven, and a radio. The strong magnetic fields generated by these appliances can damage the motor and data on the hard disk drive.
- Do not place any beverages on top of or beside the computer or other attached devices. If liquid is spilled on or in the computer or an attached device, a short circuit or other damage might occur.
- Do not eat or smoke over your keyboard. Particles that fall into your keyboard can cause damage.



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## Chapter 2. Using your computer

This chapter provides information on using some of the computer components.

To create a more comfortable condition for your use of the computer, see Chapter 3 “You and your computer” on page 27 first.

This chapter contains the following topics:

- “Registering your computer” on page 11
- “Frequently asked questions” on page 11
- “Special keys” on page 12
- “Using the touch pad” on page 13
- “Using the ThinkPad Yoga 11e Chromebook in different modes” on page 13
- “Power management” on page 21
- “Connecting to a wireless LAN” on page 22
- “Connecting a projector or an external monitor” on page 24
- “Using audio features” on page 24
- “Using the camera” on page 25
- “Using a flash media card” on page 25

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### Registering your computer

When you register your computer, information is entered into a database, which enables Lenovo to contact you in case of a recall or other severe problem. After you registered your computer with Lenovo, you will also receive quicker service when you call Lenovo for help. In addition, some locations offer extended privileges and services to registered users.

To register your computer with Lenovo, go to <http://www.lenovo.com/register>. Then, follow the instructions on the screen.

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### Frequently asked questions

The following are a few tips that will help you optimize the use of your computer.

To ensure that you receive the best performance from your computer, go to the following Web page to find information such as aids for troubleshooting and answers to frequently asked questions:  
<http://www.lenovo.com/support/faq>

#### Can I get my user guide in another language?

- To download the user guide in another language, go to <http://www.lenovo.com/support>. Then follow the instructions on the screen.

#### How can I use the battery power more effectively?

- To conserve power, or to suspend operation without exiting programs or saving files, see “Power-saving modes” on page 22.

- To achieve the best balance between performance and power saving, look for more information about using the battery in “Power management” on page 21.

**How do I get connected in different locations?**

- To troubleshoot a wireless networking issue, go to: <http://www.lenovo.com/support/faq>
- To learn more about using the wireless features of your computer, refer to “Connecting to a wireless LAN” on page 22.
- To travel more confidently, be sure to check the tips in “Traveling with your computer” on page 29.

**How do I give presentations or attach an external monitor?**

- Ensure that you follow the procedure for “Using an external monitor” on page 24.

Print the following sections and keep them with your computer in case you are unable to access this online user guide when necessary.










- “Computer stops responding” on page 33
- “Power problems” on page 36




For more information on using and configuring the Chrome OS operating system, go to the Chrome OS Web site at <http://support.google.com/chromeos>.

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**Special keys**

Your computer has several special function keys to help you work more easily and effectively. The following table introduces the function of each special key.

Special keys	Function
	Go to the previous page.
	Go to the next page.
	Refresh the current page.
	Open the current page in full-screen mode.
	Switch between windows.
	Adjust the screen brightness to a lower level.
	Adjust the screen brightness to a higher level.
	Mute the volume.
	Decrease the volume.

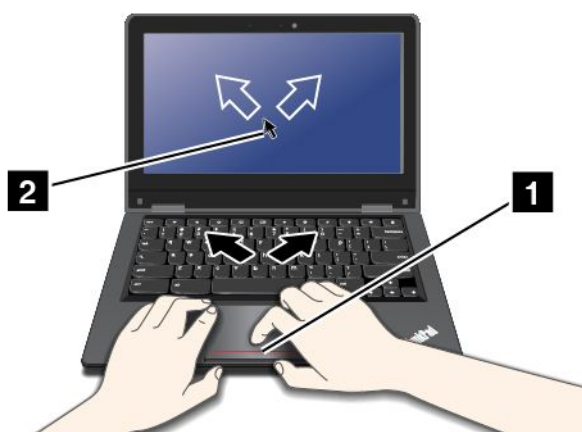
Special keys	Function
	Increases the volume.
	Lock the computer.
	Search applications and the Web.

For more information about customizing and using the keyboard, go to the Chrome OS Web site at <http://support.google.com/chromeos>.

## Using the touch pad

**Note:** Your computer might look slightly different from the illustrations in this topic.

Your computer is equipped with a touch pad **1** under the bottom edge of the keyboard. To move the pointer **2** on the screen, slide your fingertip over the touch pad in the direction in which you want the pointer to move. The left and right bottom of the touch pad work as click buttons. The functions correspond to those of the left and right mouse buttons on a conventional mouse.



### Customizing the touch pad

You can customize the touch pad as follows:

- Enable tap-to-click function.
- Change the sensitivity of the touch pad.
- Enable the simple scrolling function.

To change your touch pad settings, click the status area in the lower-right corner of the screen, then go to **Settings** → **Device**. Change the settings as desired.

## Using the ThinkPad Yoga 11e Chromebook in different modes

The ThinkPad Yoga 11e Chromebook features different modes and provides some tablet features to help you work more flexibly and conveniently.

This section contains the following topics:

- “Rotating the computer display” on page 14
- “Notebook mode” on page 14
- “Stand mode” on page 15
- “Tablet mode” on page 16
- “Tent mode” on page 17
- “Using the tablet buttons” on page 19
- “Using the multi-touch screen” on page 19

## Rotating the computer display

You can open the computer display of your ThinkPad Yoga 11e Chromebook to any angle within a range of up to 360 degrees as shown in the following illustration.

**Attention:** Do not rotate the computer display with too much force, otherwise the computer display or hinges might get damaged. Do not apply too much force to the upper-right or upper-left corner of the computer display.



## Notebook mode

You can use the ThinkPad Yoga 11e Chromebook in notebook mode in scenarios that require using a keyboard and a mouse, such as editing documents and writing e-mails.

**Attention:** Do not rotate the computer display with too much force, otherwise the computer display or hinges might get damaged. Do not apply too much force to the upper-right or upper-left corner of the computer display.

Open the computer display slowly to any angle within a range of less than 190 degrees as shown in the following illustration. Your computer is now in notebook mode.

**Note:** The degrees refers to the angle degrees between the LCD and the keyboard.



In notebook mode, the keyboard and the touch pad are enabled. You also can control some functions of your computer through the tablet buttons and the multi-touch screen, without the use of the keyboard and the touch pad. For more information, refer to “Using the tablet buttons” on page 19 and “Using the multi-touch screen” on page 19.

## Stand mode

You can use the ThinkPad Yoga 11e Chromebook in stand mode in scenarios that require limited interaction with the screen, such as viewing photos and playing videos.

**Attention:** Do not rotate the computer display with too much force, otherwise the computer display or hinges might get damaged. Do not apply too much force to the upper-right or upper-left corner of the computer display.

If your computer is in notebook mode, do the following to turn the computer from notebook mode into stand mode:

1. Slowly rotate the computer display clockwise to any angle within a range from 190 degrees to 359 degrees.

**Note:** The degrees refers to the angle degrees between the LCD and the keyboard.



2. Position your computer as shown. Your computer is now in stand mode.



In stand mode, the keyboard and the touch pad are automatically disabled. However, you can control some functions of your computer through the tablet buttons and the multi-touch screen, without the use of the keyboard and the touch pad. For more information, refer to “Using the tablet buttons” on page 19 and “Using the multi-touch screen” on page 19.

## Tablet mode

You can use the ThinkPad Yoga 11e Chromebook in tablet mode in scenarios that require frequent interaction with the screen, such as browsing the Web site.

**Attention:** Do not rotate the computer display with too much force, otherwise the computer display or hinges might get damaged. Do not apply too much force to the upper-right or upper-left corner of the computer display.

If your computer is in stand mode, do the following to turn the computer from stand mode into tablet mode:

1. Position your computer as shown and slowly rotate the computer display clockwise to the angle of 360 degrees.

**Note:** The degrees refers to the angle degrees between the LCD and the keyboard.



2. Position your computer as shown. Your computer is now in tablet mode.



In tablet mode, the keyboard and the touch pad are automatically disabled. However, you can control some functions of your computer through the tablet buttons and the multi-touch screen, without the use of the keyboard and the touch pad. For more information, refer to “Using the tablet buttons” on page 19 and “Using the multi-touch screen” on page 19.

## Tent mode

You can use the ThinkPad Yoga 11e Chromebook in tent mode in scenarios that require limited interaction with the screen, such as viewing photos and making a presentation.

**Attention:** Do not rotate the computer display with too much force, otherwise the computer display or hinges might get damaged. Do not apply too much force to the upper-right or upper-left corner of the computer display.

If your computer is in tablet mode, do the following to turn the computer from tablet mode into tent mode:

1. Slowly rotate your computer display anticlockwise to any angle within a range from 190 degrees to 359 degrees.

**Note:** The degrees refers to the angle degrees between the LCD and the keyboard.



2. Position your computer as shown. Your computer is now in tent mode.



In tent mode, the keyboard and the touch pad are automatically disabled. However, you can control some functions of your computer through the tablet buttons and the multi-touch screen, without the use of the keyboard and the touch pad. For more information, refer to “Using the tablet buttons” on page 19 and “Using the multi-touch screen” on page 19.



## Using the tablet buttons

The ThinkPad Yoga 11e Chromebook is equipped with tablet buttons as shown in the following illustration. In tablet mode, you can control some functions of your computer through the tablet buttons, without the use of the keyboard.



**1 Power button:** Press the power button to turn on the computer.

**2 Volume-up button:** Press the volume-up button to increase the volume.

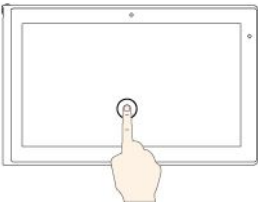
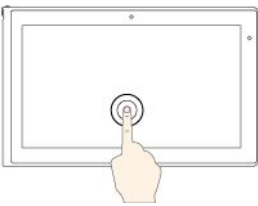
**3 Volume-down button:** Press the volume-down button to decrease the volume.

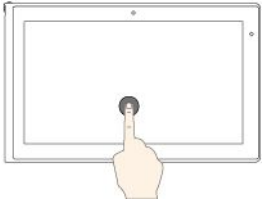
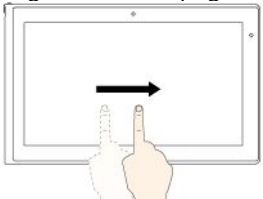
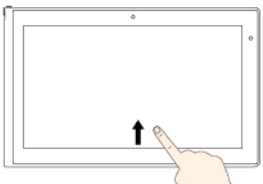
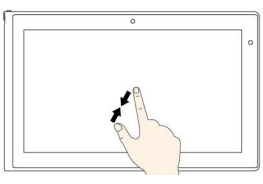
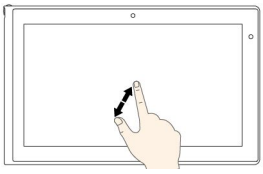
## Using the multi-touch screen

The ThinkPad Yoga 11e Chromebook is equipped with a multi-touch screen, which enables you to perform some actions without the use of the touch pad or a conventional mouse.

The following table lists some touch gestures that are applicable to the ThinkPad Yoga 11e Chromebook.

**Note:** Your computer screen might look different from the following illustrations.

Tasks	Touch gestures (ThinkPad Yoga 11e Chromebook only)
Touch	<p>Touch the screen on the area you want to click.</p>  <p>If you touch a link, the link will be highlighted for you so it is easier to see.</p>
Double touch	<p>Quickly touch the screen twice to show the right-click menu.</p> 

Tasks	Touch gestures (ThinkPad Yoga 11e Chromebook only)
Long press	<p>Touch and hold the area you want to right-click.</p>  <p>You also can select, cut, copy, paste, and drag-and-drop text and images.</p>
Swipe or drag	<p>To scroll quickly or go backwards or forwards in your browser history, swipe one finger on a Web page. Keep your finger on the screen for more precise control.</p> 
Swipe up from lower bezel	<p>Swipe up from the lower bezel to turn the shelf autohide on or off.</p> 
Pinch close	<p>Move two fingers closer together to zoom out on supported Web pages.</p>  <p><b>Note:</b> Some apps might not support the zooming function.</p>
Pinch open	<p>Move two fingers farther apart to zoom in on supported Web pages.</p>  <p><b>Note:</b> Some apps might not support the zooming function.</p>

### Tips for using the multi-touch screen

- The multi-touch screen is a glass panel. Do not apply pressure or place any metallic object on the screen, which might damage the touch panel or cause it to malfunction.
- Do not use fingernails, gloved fingers, or inanimate objects for input on the screen.

### Tips for cleaning the multi-touch screen

- Turn off the computer before cleaning the multi-touch screen.
- Use a dry, soft, and lint-free cloth or a piece of absorbent cotton to remove fingerprints or dust from the multi-touch screen. Do not apply solvents to the cloth.
- Gently wipe the screen using a top-down motion. Do not apply any pressure on the screen.

---

## Power management

The power to run your computer comes either from the ac power provided by the ac power adapter of your computer, or from the lithium-ion (Li-ion) battery provided with your computer. While you use ac power, the battery charges automatically.

When you use your computer away from electrical outlets, you depend on battery power to keep your computer running. Different computer components consume power at different rates. The more you use the power-intensive components, the faster you consume battery power.

### Using the ac power adapter

The ac power adapter that comes with your computer has two basic components:

- The ac power adapter that converts ac power for use with the computer.
- The power cord that connects to the ac outlet and to the ac power adapter.

**Attention:** Using an improper power cord could severely damage your computer.

### Connecting the ac power adapter

To connect the ac power adapter, do the following:

**Note:** Ensure that you perform the actions in the order in which they are listed.

1. Connect the power cord to the ac power adapter.
2. Connect the ac power adapter to the power connector of the computer.
3. Connect the power cord to an electrical outlet.

### Tips on using the ac power adapter

- When the ac power adapter is not in use, disconnect it from the electrical outlet.
- Do not bind the power cord tightly around the ac power adapter when the power cord is connected to the ac power adapter.
- Before you charge the battery, make sure that the battery temperature is at least 10°C (50°F).

## Checking the battery status

The battery status icon in the lower-right corner of the screen displays the percentage of battery power remaining. To check for detailed battery status information, click the battery status icon.

The rate at which you use battery power will determine how long you can use the battery of your computer between charges. Because each computer user has different habits and needs, it is difficult to predict how long a battery charge will last. There are two main factors:

- How much energy is stored in the battery when you begin to work.
- The way you use your computer. For example:
  - How bright you make the computer display.

- How often you use the wireless features.

## Charging the battery

It is recommended that you charge the battery when the battery power remaining is low. For example:

- When you find that the percentage of the remaining power is low.
- When the power alarm alerts you.

If an ac outlet is convenient, connect the ac power adapter to the computer and the ac outlet. Depending on the battery size and the physical environment, the battery will be fully charged in about three to six hours. The battery-status icon helps you identify that the battery is charging, and that the battery is fully charged.

**Note:** To maximize the life of the battery, the computer does not start recharging the battery if the remaining power is greater than 95%.

## Power-saving modes

There are several power-saving modes that you can use at any time to save power. This section introduces each mode and gives tips on the effective use of the battery power.

- **Sleep**  
In sleep mode, your work is saved to the memory, and the computer display is turned off. When your computer wakes up, your work is restored within seconds. To put your computer into sleep mode, close the computer lid if you are logged in. To resume from sleep mode, open the lid.

**Note:** If you are not logged in, closing the computer lid will shut down the computer.

- **Wireless off**  
Disable the wireless features, such as Bluetooth or wireless LAN, if you are not using them.
  - To disable the wireless LAN, click the status area in the lower-right corner of the screen, and then go to **Settings → Internet connection → Wi-Fi network**. In the drop-down list box, select **Disable Wi-Fi**.
  - To disable the bluetooth feature, click the status area in the lower-right corner of the screen, go to **Settings → Bluetooth**, and then clear **Enable bluetooth**.

## Maximizing the battery life

To maximize the life of the battery, do the following:

- Use the battery until the charge is completely depleted; that is, use the battery until the battery status indicator starts blinking orange.
- Recharge the battery completely before using it. The battery is fully charged if the battery indicator shows green when the ac power adapter is plugged in.
- Always use power management features such as sleep mode.

---

## Connecting to a wireless LAN

Wireless connection is the transfer of data without the use of cables but by means of radio waves only. A wireless local area network (LAN) covers a relatively small geographic area, such as an office building or a house. Devices based on the 802.11 standards can be connected to this type of network.

Your computer comes with a built-in wireless network card and a configuration utility to help you establish wireless connections and monitor the connection status. This enables you to stay connected to your network while you are at the office, in a meeting room, or at home, with no need for a wired connection.

## Establishing wireless LAN connections








To establish a wireless connection, do the following:

1. Click the status icon in the lower-right corner of the screen.
2. Go to **Settings → Internet connection → Wi-Fi network**.
3. Click the **Wi-Fi network** drop-down list box, a list of available wireless networks is displayed.
4. Double-click a network to connect to it. Provide required information if needed.

## Wireless LAN connection status

You can view your computer wireless network connection status and wireless signal strength through the wireless network connection status icon. The wireless network connection icon is located in the lower-right corner of the screen.

The following table lists the wireless status icons and the corresponding description.

Icon	Description
	Wireless LAN connection is enabled. To disable it, click this icon.
	Wireless LAN connection is disabled. To enable it, click this icon.
	Wireless LAN secure connection. To use a secure connection, you might need a password.
	No Wireless LAN connection.
	Power to the wireless radio is on and signal strength is excellent.
	Power to the wireless radio is on and the signal strength is marginal.
	Power to the wireless radio is on and the signal strength is poor.

**Note:** If you cannot connect to the wireless network, try moving your computer closer to the wireless access point.

## Tips for using the wireless LAN feature

To achieve the best wireless network connection, follow the following guidelines:

- Place your computer so that there are as few obstacles as possible between the wireless LAN access point and the computer.
- Open your computer lid to an angle of slightly more than 90 degrees.
- If you use the wireless feature (the 802.11 standard) of your computer simultaneously with a Bluetooth option, the data transmission speed can be delayed and the performance of the wireless feature can be degraded.
- If you want to use the wireless features on an airplane, check the wireless services with the airline before boarding the airplane.
- If there are restrictions on the use of computer wireless features on an airplane, you need to disable your computer wireless features before boarding.

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## Connecting a projector or an external monitor

You can connect your computer to a projector to give presentations or you can connect your computer to an external monitor to expand your workspace. This topic provides information about connecting a projector or an external monitor.

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## Using an external monitor

**Note:** When you connect an external monitor, a video interface cable with a ferrite core is required.

Your computer can support a maximum video resolution of up to 1920x1080 (with an external monitor connected to the HDMI connector), provided that the external monitor also supports that resolution. For more information about the external monitor, refer to the manuals provided with the external monitor.

You can set any resolution for either the computer display or the external monitor. When you use both at the same time, the resolution of both is the same. If you set a higher resolution for the computer display, you can see only part of the screen at a time. You can see other parts by moving the image with the pointing device.

You can move the display output to the computer display, the external monitor, or both in the Display Settings window.

### Connecting an external monitor

To connect an external monitor, do the following:

1. Connect the external monitor to the monitor connector of your computer.
2. Connect the external monitor to an electrical outlet.
3. Turn on the external monitor.

Once connected, your computer should automatically detect the monitor. By default, the same graphics will be displayed on both the computer and the external monitor.

### Considerations for connecting an external monitor

- If you set a resolution higher than the resolution you are using on the computer monitor, and use an external monitor that does not support that resolution, take advantage of the virtual screen function, which enables you to display only a part of the high-resolution screen image your computer produces. You can see other parts of the image by moving the screen with the pointing device.
- If the external monitor you are using is outdated, the resolution and the refresh rate might be limited.

---

## Using audio features

Your computer is equipped with the following items:

- Microphone
- Speakers
- Audio connector, 3.5 mm (0.14 inch) in diameter

Your computer also has an audio chip that enables you to enjoy various multimedia audio features:

- Compliant with Inter-IC Sound Bus (I2S)
- Playback of musical instrument digital interface (MIDI) and moving picture experts group audio layer-3 (MP3) files
- Recording and playback of pulse-code modulation (PCM) and waveform audio file format (WAV) files

- Recording from various sound sources, such as a headset attached

The following table shows which functions of the audio devices attached to your computer are supported.

Table 1. Audio feature list

Connector	Headset with a 3.5 mm (0.14-inch), 4-pole plug	Conventional headphones	Conventional microphone
Audio connector	Headphone and microphone functions supported	Headphone function supported	Not supported

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## Using the camera

Your computer has an integrated camera. You can use the camera to preview your video image and take a snapshot of your current image.

To use the camera, download a camera application that is compatible with the Chrome OS operating system. You can use the camera application to enable and control the camera. Features and functions vary among applications.

When the camera is started, the green camera-in-use indicator turns on. You also can use the camera with other programs that provide features such as photographing, video capturing, and video conferencing. To use the camera with other programs, open one of the programs and start the photographing, video capturing, or video conferencing function. Then, the camera will start automatically and the green camera-in-use indicator will turn on. For more information about using the camera with a program, refer to the help information system of the program.

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## Using a flash media card

Your computer has a media card reader slot, and it supports the following types of cards:

- MultiMediaCard (MMC) module
- Secure Digital (SD) card
- Secure Digital eXtended-Capacity (SDXC) card
- Secure Digital High-Capacity (SDHC) card

**Attention:** While transferring data to or from a flash media card, such as an SD card, do not put your computer into sleep mode before the data transfer completes; otherwise, your data might be damaged.

## Installing a flash media card

**Attention:** Before you start installing a card, touch a metal table or a grounded metal object. This action reduces any static electricity from your body. Static electricity could damage the card.

To install a flash media card, do the following:

1. Locate the media card slot on your computer. See “Left-side view” on page 5.
2. Ensure that the card is correctly oriented.
3. Insert the card firmly into the media card slot.

**Note:** The card might stop when it is completely inserted into the slot.

## Removing a flash media card

### Attention:

- Before removing a card, stop the card first. Otherwise, data on the card might get damaged or lost.
- Do not remove a card while the computer is in sleep mode. Otherwise, the system might not respond when you try to resume operation.

To remove a flash media card, do the following:

1. Click the triangular icon on the right side of **External drive** to stop the flash media card.
2. Pull the card from the slot to eject it from your computer, then store it safely for future use.

**Note:** If you do not remove the card from your computer after you have clicked the triangular icon, the card can not be accessed. To access the card again, you must remove it, and then insert it.



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## Chapter 3. You and your computer

This chapter provides information about accessibility, comfort, and traveling with your computer.

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### Accessibility and comfort

Good ergonomic practice is important to get the most from your personal computer and to avoid discomfort. Arrange your workplace and the equipment you use to suit your individual needs and the kind of work that you perform. In addition, use healthy work habits to maximize your performance and comfort while using your computer.

The following topics provide information about arranging your work area, setting up your computer equipment, and establishing healthy work habits.

Lenovo is committed to providing the latest information and technology to our customers with disabilities. Refer to the accessibility information that outlines our efforts in this area. See “Accessibility information” on page 28.

### Ergonomic information

Working in the virtual office might mean adapting to frequent changes in your environment. For example, adapting to the surrounding lighting sources, proper seating, and the placement of your computer hardware, can help you improve your performance and achieve greater comfort.

The following example shows someone in a conventional setting. Even when not in such a setting, you can follow many of these tips. Develop good habits, and they will serve you well.



**General posture:** Make minor modifications in your working posture to deter the onset of discomfort caused by long periods of working in the same position. Frequent, short breaks from your work also help to prevent minor discomfort associated with your working posture.

**Display:** Position the display to maintain a comfortable viewing distance of 510-760 mm (20-30 inches). Avoid glare or reflections on the display from overhead lighting or outside sources of light. Keep the display screen clean and set the brightness to levels that enable you to see the screen clearly.

**Head position:** Keep your head and neck in a comfortable and neutral (vertical, or upright) position.

**Chair:** Use a chair that gives you good back support and seat height adjustment. Use chair adjustments to best suit your desired posture.

**Arm and hand position:** If available, use chair arm rests or an area on your working surface to provide weight support for your arms. Keep your forearms, wrists, and hands in a relaxed and neutral (horizontal) position. Type with a soft touch without pounding the keys.

**Leg position:** Keep your thighs parallel to the floor and your feet flat on the floor or on a footrest.

### ***What if you are traveling?***

It might not be possible to observe the best ergonomic practices when you are using your computer while on the move or in a casual setting. Regardless of the setting, try to observe as many of the tips as possible. Sitting properly and using adequate lighting, for example, will help you maintain desirable levels of comfort and performance.

### ***Questions about vision?***

The visual display screens of ThinkPad notebook computers are designed to meet the highest standards and to provide you with clear, crisp images and large, bright displays that are easy to see, yet easy on the eyes. Of course, any concentrated and sustained visual activity can be tiring. If you have questions on eye fatigue or visual discomfort, consult a vision-care specialist for advice.

## **Comfort**

Observe the following guidelines to achieve greater comfort and improve performance.

**Active sitting and rest breaks:** The longer you sit and work with your computer, the more important it is to observe your working posture. Follow “Ergonomic information” on page 27 and practice “active sitting” to avoid discomfort associated with your working postures. Making minor voluntary postural changes and taking short frequent work breaks are the key ingredients for healthy computing. Your computer is light and mobile; you can easily reposition your working surface to accommodate many posture modifications.

**Work area setup options:** Familiarize yourself with all of your office furniture so that you know how to adjust your work surface, seat, and other work tools to accommodate your preferences for comfort. If your work area is not in an office setting, be sure to take special note of employing active sitting and taking work breaks. Many ThinkPad product solutions are available to help you modify and expand your computer to best suit your needs. You can find some of these options at <http://www.lenovo.com/essentials>. Explore your options for docking solutions and external products that provide the adjustability and features that you want.

## **Accessibility information**

Lenovo is committed to providing people with disabilities greater access to information and technology. As a result, the following information provides ways to help users that have hearing, vision, and mobility limitations get the most out of their computer experience.

Assistive technologies enable users to access information in the most appropriate way. Some of these technologies are already provided in your operating system. Others can be purchased through vendors, or accessed through the World Wide Web <http://www.lenovo.com/healthycomputing>.

### **Assistive technologies**

Some accessibility technologies are available through the Accessibility Options program. Depending on your operating system, the number of accessibility options available varies. In general, accessibility

options enhance the way users with hearing, vision, or mobility limitations navigate and use their computer. For example, some users might not have the fine motor skills required to use a mouse or select key combinations. Other users might require larger fonts or high-contrast display modes. In some cases, magnifiers and built-in speech synthesizers are available.

### **Screen-reader technologies**

Screen-reader technologies are primarily focused on software program interfaces, help information systems, and a variety of online documents. For additional information about screen readers, see the following:

- Using PDFs with screen readers:  
<http://www.adobe.com/accessibility.html?promoid=DJGVE>
- Using the JAWS screen reader:  
<http://www.freedomscientific.com/jaws-hq.asp>
- Using the NVDA screen reader:  
<http://www.nvaccess.org/>

### **Industry-standard connectors**

Your computer provides industry-standard connectors that enable you to connect assistive devices, if needed.

For more information on the location and function of each connector, see “Locating computer controls, connectors, and indicators” on page 1.

### **Documentation in accessible formats**

Lenovo provides electronic documentation in accessible formats. Lenovo electronic documentation, such as properly tagged PDF files or HyperText Markup Language (HTML) files, is developed to ensure that visually impaired users can read the documentation through a screen reader. Each image in the documentation also includes adequate alternative text to explain the image so that visually impaired users can understand the image when they use a screen reader.

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## **Traveling with your computer**

This topic provides information to help you work with your computer when you are traveling.

### **Travel tips**

Use the following travel tips to travel more confidently and efficiently with your computer.

- Although it is safe to allow your computer to go through the x-ray machines at airport security stations, it is important to keep your eyes on the computer at all times to prevent theft.
- Consider bringing an electrical adapter for use in an airplane or automobile.
- If you carry an ac power adapter, detach the ac cord from it to avoid damaging the cord.

### **Travel tips on airplanes**

If you carry your computer into an airplane, take note of the following tips:

- If you intend to use your computer or wireless services (such as Internet and Bluetooth), check with the airline for restrictions and availability of services before boarding the airplane. If there are restrictions on the use of computers with wireless features on the airplane, you must abide by those restrictions. If necessary, disable wireless features before boarding.
- Be careful about the seat in front of you on airplanes. Angle your computer display so that it does not get caught when the person in front of you leans back.
- When taking off, remember to turn off your computer or put it into sleep mode.

## Travel accessories

The following is a checklist of items to consider packing when you are going to travel:

- ThinkPad ac power adapter
- External mouse, if you are accustomed to using one
- External storage device
- HDMI cable
- HDMI-to-VGA monitor cable
- A quality carrying case that provides adequate cushion and protection

If you are traveling to another country, you might want to consider an ac power adapter for the country to which you are traveling.

To purchase travel accessories, go to <http://www.lenovo.com/essentials>.

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## Chapter 4. Troubleshooting computer problems

When you experience a problem, refer to the corresponding sections in this topic to try to solve the problem by yourself.

This chapter contains the following topics:

- “Taking care of your computer” on page 31
- “Computer stops responding” on page 33
- “Spills on the keyboard” on page 33
- “A wireless LAN problem” on page 34
- “Keyboard problems” on page 34
- “Problems with the display and multimedia devices” on page 34
- “Battery and power problems” on page 36

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### Taking care of your computer

Although your computer is designed to function reliably in normal work environments, you need to use common sense in handling it. By following the important tips in this topic, you will get the most use and enjoyment out of your computer.

#### Be careful about where and how you work

- Store packing materials safely out of the reach of children to prevent the risk of suffocation from plastic bags.
- Keep your computer away from magnets, activated cellular phones, electrical appliances, or speakers (more than 13 cm or 5 inches).
- Avoid subjecting your computer to extreme temperatures (below 5°C/41°F or above 35°C/95°F).
- Some appliances, such as certain portable desktop fans or air purifiers, can produce negative ions. If a computer is close to such an appliance, and is exposed for an extended time to air containing negative ions, it might become electrostatically charged. Such a charge might be discharged through your hands when you touch the keyboard or other parts of the computer, or through connectors on I/O devices connected to the computer. Even though this kind of electrostatic discharge (ESD) is the opposite of a discharge from your body or clothing to the computer, it poses the same risk of a computer malfunction.

Your computer is designed and manufactured to minimize any effects of electrostatic charge. An electrostatic charge above a certain limit, however, can increase the risk of ESD. Therefore, when using the computer close to an appliance that can produce negative ions, give special attention to the following:

- Avoid directly exposing your computer to the air from an appliance that can produce negative ions.
- Keep your computer and peripherals as far as possible from such an appliance.
- Wherever possible, ground your computer to facilitate safe electrostatic discharge.

**Note:** Not all such appliances cause a significant electrostatic charge.

#### Be gentle with your computer

- Avoid placing any objects (including paper) between the display and the keyboard or the palm rest.
- Do not turn your computer over while the ac power adapter is connected. This could break the adapter plug.

### **Carry your computer properly**

- Before moving your computer, be sure to remove any media, turn off attached devices, and disconnect cords and cables.
- When picking up your open computer, hold it by the bottom. Do not pick up or hold your computer by the display.

### **Handle storage media and drives properly**

- Store your external and removable hard disk drive or optical drives in the appropriate containers or packaging when they are not being used.
- Before you install any of the following devices, touch a metal table or a grounded metal object. This action reduces any static electricity from your body. The static electricity could damage the device.
  - Memory card, such as an SD card, SDHC card, SDXC card, and a MultiMediaCard

**Note:** Not all listed devices are included in your computer.

- While transferring data to or from a flash media card, such as an SD card, do not put your computer into sleep mode before the data transfer is complete. To do so might cause damage to your data.

### **Register your computer**

- Register your ThinkPad computer with Lenovo at <http://www.lenovo.com/register>. For more information, see “Registering your computer” on page 11.

### **Be sure not to modify your computer**

- Only an authorized ThinkPad repair technician should disassemble and repair your computer.

## **Cleaning the cover of your computer**

Occasionally clean your computer by doing the following:

1. Prepare a mixture of a gentle kitchen-use detergent. The detergent must not contain abrasive powder or strong chemicals such as acid or alkaline. Use five parts water to one part detergent.
2. Absorb the diluted detergent into a sponge.
3. Squeeze excess liquid from the sponge.
4. Wipe the cover with the sponge, using a circular motion and taking care not to let any excess liquid drip.
5. Wipe the surface to remove the detergent.
6. Rinse the sponge with clean running water.
7. Wipe the cover with the clean sponge.
8. Wipe the surface again with a dry, soft, lint-free cloth.
9. Wait for the surface to dry completely and remove any fibers from the cloth.

### **Cleaning your computer keyboard**

To clean the computer keyboard, do the following:

1. Apply some isopropyl rubbing alcohol to a soft, dust-free cloth.

**Note:** Avoid spraying cleaner directly onto the keyboard.

2. Wipe each keytop surface with the cloth. Wipe the keys one by one; if you wipe several keys at a time, the cloth might hook onto an adjacent key and possibly damage it. Make sure that no liquid drips onto or between the keys.
3. Allow to dry.

4. To remove any crumbs or dust from beneath the keys, you can use a camera blower with a brush or cool air from a hair dryer.

### **Cleaning your computer display**

To clean the computer display, do the following:

1. Gently wipe the display with a dry, soft, lint-free cloth. If you see a scratchlike mark on your display, it might be a stain transferred from the keyboard when the cover was pressed from the outside.
2. Wipe or dust the stain gently with a soft, dry cloth.
3. If the stain remains, moisten a soft, lint-free cloth with water or a 50-50 mixture of isopropyl alcohol and water that does not contain impurities.

**Note:** Avoid spraying cleaner directly onto the keyboard.

4. Wring out as much of the liquid as you can.
5. Wipe the display again; do not let any liquid drip into the computer.
6. Be sure to dry the display before closing it.

---

## **Computer stops responding**

**Print these instructions now and keep it with your computer for reference later.**

If your computer is completely unresponsive (you cannot use the touch pad or the keyboard), do the following:

1. Press and hold the power button until the computer turns off. After the computer is turned off, restart the computer by pressing the power button. If the computer does not turn on, continue with step 2.
2. While the computer is off, remove the ac power adapter from the computer. Hold down the power button for 10 seconds. Connect the ac power adapter. If the computer does not turn back on, continue with step 3.
3. While the computer is off, remove the ac power adapter from the computer. Remove all external devices that are attached to your computer (keyboard, mouse, printer, scanner, and so on). Repeat step 2.

**Note:** If the computer starts with ac power but does not start when ac power is disconnected, call the Customer Support Center for support. Go to <http://www.lenovo.com/support/phone> for the latest list of support phone numbers for your country or region.

If the computer still does not start up, call the Customer Support Center and a Customer Support Specialist will assist you.

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## **Spills on the keyboard**

With a mobile computer, there are increased chances of spilling liquids on the keyboard. Because most liquids conduct electricity, liquid spilled on the keyboard could create numerous short circuits, potentially causing irreparable damage to your computer.

**If you spill something on your computer:**

**Attention:** Ensure that no liquid creates a short circuit between you and the ac power adapter (if in use). Although you might lose some data or work by turning off the computer immediately, leaving the computer on might make your computer unusable.

1. Carefully disconnect the ac power adapter immediately.
2. Turn off the computer immediately. The more quickly you stop the current from passing through the computer, the more likely you will reduce damage from short circuits.

3. Wait until you are certain that all the liquid is dry before turning on your computer.

---

## A wireless LAN problem

**Problem:** You cannot connect to the network using the built-in wireless network card.

**Solution:** Make sure that:

- The wireless radio is enabled.
- Your wireless LAN driver is the latest version.
- Your computer is within range of a wireless access point.

---

## Keyboard problems

- **Problem:** All or some keys on the keyboard do not work.

**Solution:** If an external numeric keypad is connected:

1. Turn off the computer.
2. Remove the external numeric keypad.
3. Turn on the computer and try using the keyboard again.

If the keyboard problem is resolved, carefully reconnect the external numeric keypad. Make sure that you have seated the connectors correctly.

If keys on the keyboard still do not work, have the computer serviced.

- **Problem:** All or some keys on the external numeric keypad do not work.

**Solution:** Make sure that the external numeric keypad is correctly connected to the computer.

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## Problems with the display and multimedia devices

This topic includes the most common problems with displays and multimedia devices, including the computer display, the external monitor, and the audio devices.

### Computer screen problems

- **Problem:** When I turn on the computer, nothing is displayed on the screen and the computer does not beep while starting up.

**Solution:** Ensure that:

- The ac power adapter is connected to the computer and the power cord is plugged into a working electrical outlet.
- The computer is turned on. (Turn the power button on again for confirmation.)

If these items are correctly set, and the screen remains blank, have the computer serviced.

- **Problem:** Incorrect characters are displayed on the screen.

**Solution:** Ensure that you install the operating system or program correctly. If they are installed and configured correctly, have the computer serviced.

- **Problem:** The screen stays on even after you turn off your computer.

**Solution:** Press and hold the power button for about eight seconds to turn off your computer; then turn it on again.



- **Problem:** Missing, discolored, or bright dots appear on the screen every time you turn on your computer.  
**Solution:** This is an intrinsic characteristic of the TFT technology. Your computer display contains multiple thin-film transistors (TFTs). A small number of missing, discolored, or bright dots on the screen might exist all the time.
- **Problem:** My screen goes blank while the computer is on.  
**Solution:** Your screen saver or power management might have been enabled. Do either of the following:
  - Touch the touch pad, or press a key to exit the screen saver.
  - Press the power button to resume from sleep.

## External monitor problems

- **Problem:** The external monitor is blank.  
**Solution:** To solve the problem, do the following:
  1. Connect the external monitor to another computer to make sure that it works.
  2. Reconnect the external monitor to your computer.
  3. Refer to the manual shipped with the external monitor to check the resolutions and refresh rates that are supported.
    - If the external monitor supports the same resolution as the computer display or a higher resolution, view output on the external monitor or on both the external monitor and the computer display.
    - If the external monitor supports a lower resolution than the computer display, view output on the external monitor only. (If you view output on both the computer display and the external monitor, the external monitor screen will be blank or distorted.)
- **Problem:** Wrong characters are displayed on the screen.  
**Solution:** Ensure that you follow the correct procedure when installing the operating system or program. If you did, have the external monitor serviced.
- **Problem:** The screen position on the external monitor is incorrect when that monitor is set for a high resolution.  
**Solution:** Sometimes, when you use a high resolution such as 1600x1200, the image is shifted to left or right on the screen. To correct this, first make sure that your external monitor supports the display mode (the resolution and the refresh rate) that you have set. If it does not, set a display mode that the monitor supports. If it does support the display mode you have set, go to the setup menu for the monitor itself and adjust the settings there. Usually the external monitor has buttons for access to the setup menu. For details, see the documentation that comes with the monitor.

## Audio problems

- **Problem:** A volume or balance slider cannot be moved.  
**Solution:** The slider might be grayed out. This means that its position is fixed by the hardware and cannot be changed.
- **Problem:** The volume sliders do not stay in place when some audio programs are used.  
**Solution:** It is normal for the sliders to change position when certain sound programs are used. The programs are aware of the settings in the Volume Mixer window and are allowed to change the settings themselves. Usually the application has sliders available to control the sound from within the program.
- **Problem:** The balance slider cannot completely mute one channel.

**Solution:** The control is designed to compensate for minor differences in balance and does not completely mute either channel.

- **Problem:** There is no volume control for MIDI sound in the Volume Mixer window.

**Solution:** Use the hardware volume control. This is because the built-in synthesizer software does not support the control.

- **Problem:** The sound cannot be turned off even if you set the Master volume control at minimum.

**Solution:** You still can hear some sound even though you have set the Master volume control at minimum. To turn off the sound completely, go to the Master volume control and select **Mute speakers**.

- **Problem:** When you connect a headphone to your computer while playing sound, a speaker does not produce sound.

**Solution:** Once the headphone is attached, the streaming is automatically redirected to it. If you want to listen to sound from the speakers again, be sure to set those speakers as the default device.

---

## Battery and power problems

This topic contains instructions on troubleshooting battery and power problems.

### Battery problems

- **Problem:** The built-in battery cannot be fully charged in the standard charge time when the computer is powered off.

**Solution:** The battery might be over-discharged. Do the following:

1. Turn off the computer.
2. Connect the ac power adapter to the computer and let it charge.

If the built-in battery cannot be fully charged in 24 hours, have it serviced.

- **Problem:** Your computer shuts down before the battery-status indicator shows empty, or your computer operates after the battery-status indicator shows empty.

**Solution:** Discharge and recharge the built-in battery.

- **Problem:** The operating time for a fully charged built-in battery is short.

**Solution:** Discharge and recharge the built-in battery. If your battery operating time is still short, have your computer serviced.

- **Problem:** The computer does not operate with a fully charged built-in battery.

**Solution:** The surge protector in the built-in battery might be active. Turn off the computer for one minute to reset the protector; then turn on the computer again.

- **Problem:** The built-in battery cannot be charged.

You cannot charge the battery when it is too hot. Turn off the computer and allow it to cool to room temperature. After the computer cools, recharge the battery. If the battery still cannot be charged, have your computer serviced.

### Power problems

**Print these instructions now and keep it with your computer for reference later.**

**If your computer is getting no power at all, check the following items:**

1. Check all power connections. Remove any power strips and surge protectors to connect the ac power adapter directly to the ac power outlet.
2. Inspect the ac power adapter. Check for any physical damage, and make sure that the power cable is firmly attached to the adapter brick and the computer.
3. Verify the ac power source is working by attaching another device to the outlet.
4. Remove all devices and then test for system power with minimal devices attached.

**If your computer does not run on battery power, check the following items:**

1. If the battery runs out of power, attach ac power adapter to recharge the battery.
2. If the battery is charged but the computer does not run, call Lenovo Customer Service Center to have it serviced.

## A power button problem

**Problem:** The system does not respond, and you cannot turn off the computer.

**Solution:** Turn off the computer by pressing and holding the power button for four seconds or more. If the system is still not reset, remove the ac power adapter.

## Sleep problems

- **Problem:** The computer enters sleep mode unexpectedly.

**Solution:** If the microprocessor overheats, the computer automatically enters sleep mode to allow the computer to cool and to protect the microprocessor and other internal components. Check the settings for sleep mode.

- **Problem:** The computer enters sleep mode immediately after the power-on self-test.

**Solution:** Make sure that:

- The battery is charged.
- The operating temperature is within the acceptable range. Refer to “Specifications” on page 9.

If the battery is charged and the temperature is within range, have the computer serviced.

- **Problem:** A critical low-battery error occurs, and the computer immediately turns off.

**Solution:** The battery power is getting low. Connect the ac power adapter to the computer and to an electrical outlet.

- **Problem:** The computer does not return from sleep mode, and the computer does not work.

**Solution:** If the computer does not return from sleep mode, it might have entered sleep mode automatically because the battery is depleted. Check the system-status indicator (illuminated ThinkPad logo).

- If the system-status indicator (illuminated dot in the ThinkPad logo) blinks slowly, your computer is in sleep mode. Connect the ac power adapter to the computer; then open the computer screen.
- If the system-status indicator (illuminated dot in the ThinkPad logo) is off, your computer is in power-off state. Connect the ac power adapter to the computer; then press the power button to resume operation.

If the system still does not return from sleep mode, your system might stop responding and you might not be able to turn off the computer. In this case, you need to reset the computer. If you have not saved your data, it might be lost. To reset the computer, press and hold the power button for eight seconds or more. If the system is still not reset, remove the ac power adapter.

- **Problem:** Your computer does not enter sleep mode.

**Solution:** Check whether any option has been selected to disable your computer from entering sleep mode.

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## Chapter 5. Replacing devices

This chapter contains the following items:

- “Static electricity prevention” on page 39
- “Replacing the base cover” on page 39
- “Replacing the keyboard” on page 40

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### Static electricity prevention

Static electricity, although harmless to you, can seriously damage computer components and options. Improper handling of static-sensitive parts can cause damage to the part. When you unpack an option or a CRU, do not open the static-protective package containing the part until the instructions direct you to install the part.

When you handle options or CRUs, or perform any work inside the computer, take the following precautions to avoid static-electricity damage:

- Limit your movement. Movement can cause static electricity to build up around you.
- Always handle components carefully. Handle adapters and other circuit boards by the edges. Never touch exposed circuitry.
- Prevent others from touching components.
- When you install a static-sensitive option or CRU, touch the static-protective package containing the part to a metal expansion-slot cover or other unpainted metal surface on the computer for at least two seconds. This reduces static electricity from the package and your body.
- When possible, remove the static-sensitive part from the static-protective package and install the part without setting it down. When this is not possible, place the static-protective package on a smooth, level surface and place the part on the package.
- Do not place the part on the computer cover or other metal surface.

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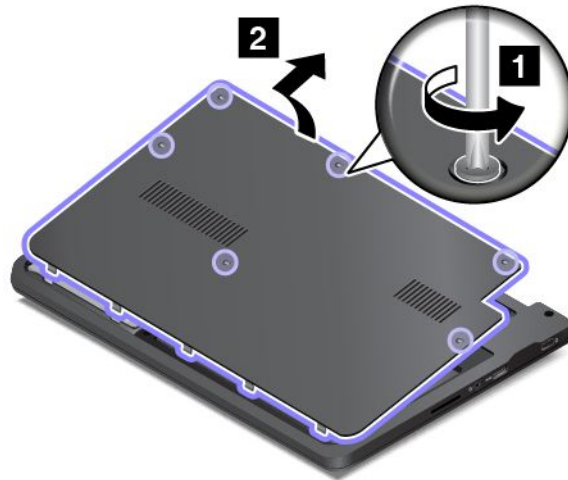
### Replacing the base cover

Before you start, print these instructions. Read the “Important safety information” on page iv first.

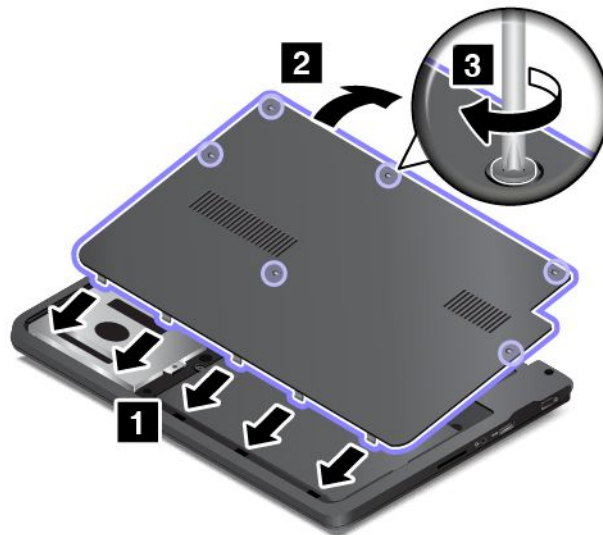
To replace the base cover, do the following:

1. Turn off the computer; then disconnect the ac power adapter and all cables from the computer. Wait three to five minutes to let the computer cool.
2. Close the computer display and turn the computer over.

3. Loosen the screws **1** and then remove the base cover **2**.



4. Install the base cover **1** and pivot it downwards **2**. Then tighten the screws **3**.



5. Turn the computer over again. Connect the ac power adapter and all cables.

---

## Replacing the keyboard

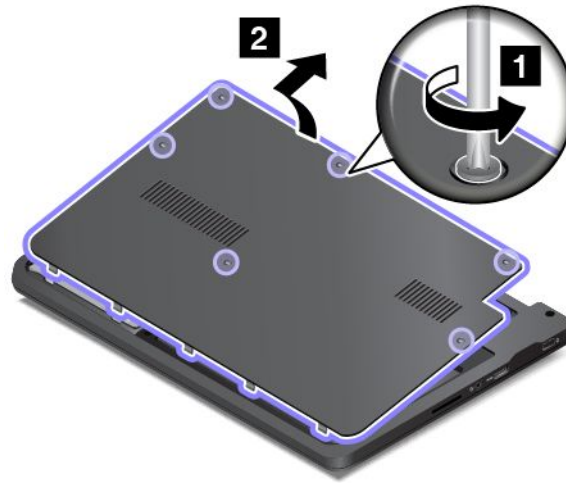
Before you start, print these instructions. Read the “Important safety information” on page iv first.

### Removing the keyboard

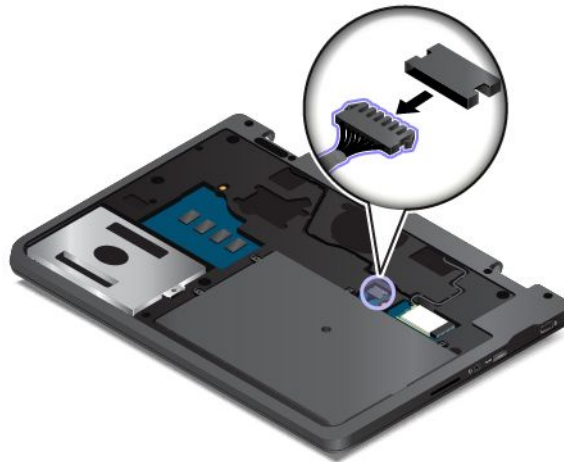
To remove the keyboard, do the following:

1. Turn off the computer; then disconnect the ac power adapter and all cables from the computer. Wait three to five minutes to let the computer cool.
2. Close the computer display and turn it over.

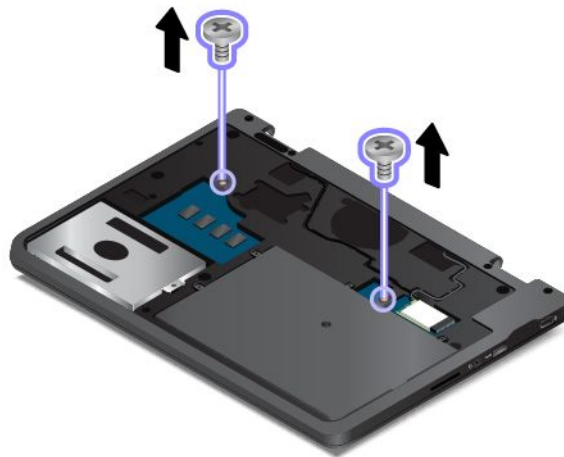
3. Loosen the screws **1** and then remove the base cover **2**.



4. Disconnect the cable for the built-in battery from the connector as shown.



5. Remove the screws that secure the keyboard.



6. Turn the computer over and open the display.

7. Push hard in the direction as shown to unlatch the keyboard.



8. Pivot the keyboard slightly upward **1**. Then turn over the keyboard **2**.





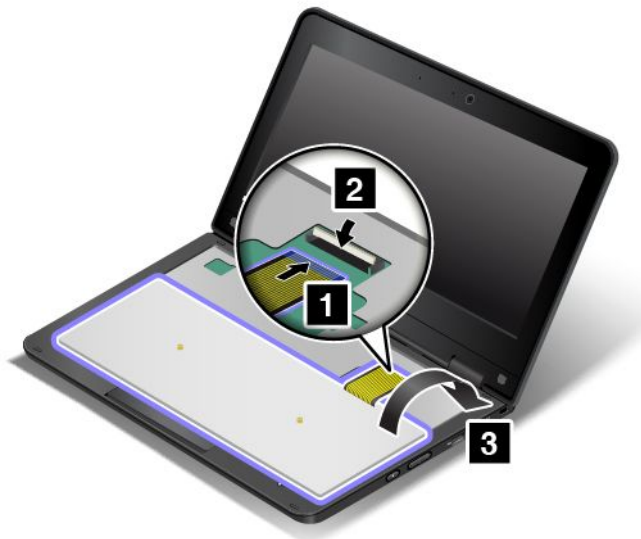
9. Detach the connector and remove the keyboard.



### Installing the keyboard

To install the keyboard, do the following:

1. Attach the cable and then turn over the keyboard.



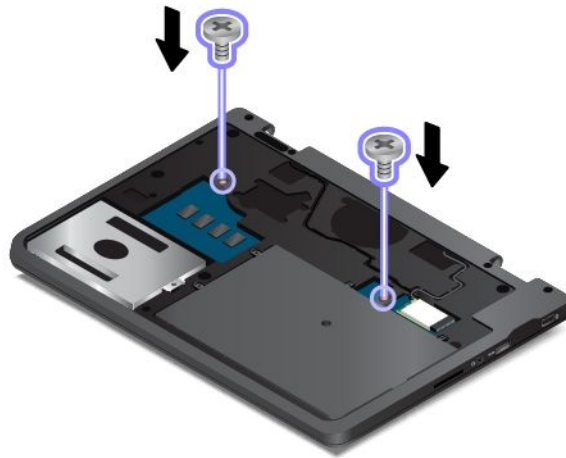
2. Insert the keyboard into the keyboard bezel as shown. Ensure that the top edge of the keyboard is under the frame of the keyboard bezel.



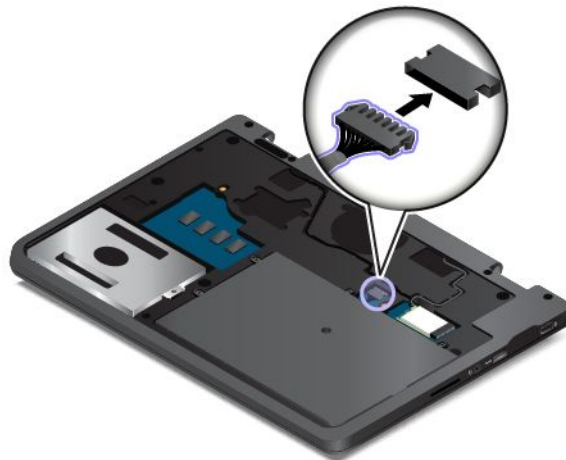
3. Slide the keyboard in the direction shown by the arrows until the latches of the keyboard frame are hidden under the keyboard bezel.



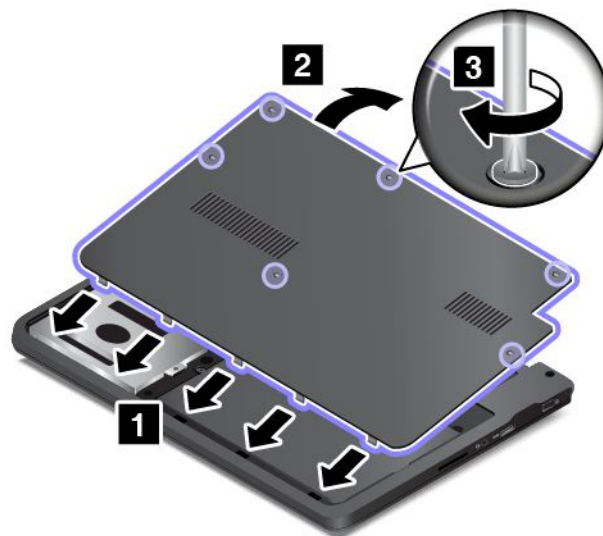
4. Close the display and turn the computer over. Then, reinstall the screws.



5. Connect the cable for the built-in battery.



6. Install the base cover **1** and pivot it downwards **2**. Then tighten the screws **3**.



7. Turn the computer over again. Connect the ac power adapter and all cables.

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## Chapter 6. Getting support

This chapter provides information about getting help and support from Lenovo.

- “Before you contact Lenovo” on page 47
- “Getting help and service” on page 47
- “Purchasing additional services” on page 49

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### Before you contact Lenovo

Often, you can solve your computer problems by referring to the information in the explanations of error codes, running diagnostic programs, or by consulting the Lenovo Web site.

#### Registering your computer

Register your computer with Lenovo at <http://www.lenovo.com/register>. For more information, see “Registering your computer” on page 11.

#### Recording information

Before you talk to a Lenovo representative, record the following important information about your computer.

#### Recording problem symptoms and details

Collect the answers to the questions below before you call for help. Then, you will be able to get help as quickly as possible.

- What is the problem? Is it continuous or intermittent?
- Is there an error message? What is the error code, if any?
- What operating system are you using? Which version?
- Which software programs were running at the time of the problem?
- Can the problem be reproduced? If so, how?

#### Recording system information

The serial number label is on the bottom of your computer. Record the machine type and the serial number.

- What is the name of your Lenovo product?
- What is the machine type?
- What is the serial number?

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### Getting help and service

If you need help, service, technical assistance, or just want more information about Lenovo products, you will find a wide variety of sources available from Lenovo to assist you. This section contains information about where to go for additional information about Lenovo and our products, what to do if you experience a problem with your computer, and whom to call for service should it be necessary.

Information about your computer and preinstalled software, if any, is available in the documentation that comes with your computer. That documentation includes printed books, online books, readme files, and help files. In addition, information about Lenovo products is available on the World Wide Web. For information, contact the Customer Support Center.

## Lenovo Support Web site

Technical support information is available on the Lenovo Support Web site at:  
<http://www.lenovo.com/support>

This Web site is updated with the latest support information such as the following:

- Product and service warranty
- Product and parts details
- User guides and manuals
- Knowledge base and frequently asked questions

## Calling Lenovo

If you have tried to correct the problem yourself and still need help, during the warranty period, you can get help and information by telephone through the Customer Support Center. The following services are available during the warranty period:

- Problem determination - Trained personnel are available to assist you with determining if you have a hardware problem and deciding what action is necessary to fix the problem.
- Lenovo hardware repair - If the problem is determined to be caused by Lenovo hardware under warranty, trained service personnel are available to provide the applicable level of service.
- Engineering change management - Occasionally, there might be changes that are required after a product has been sold. Lenovo or your reseller, if authorized by Lenovo, will make selected Engineering Changes (ECs) that apply to your hardware available.

The following items are not covered:

- Replacement or use of parts not manufactured for or by Lenovo or non-warranted parts

**Note:** All warranted parts contain a 7-character identification in the format FRU XXXXXXX.

- Identification of software problem sources
- Changes, modifications, or upgrades to device drivers
- Installation and maintenance of network operating systems (NOS)
- Installation and maintenance of programs

For the terms and conditions of the Lenovo Limited Warranty that applies to your Lenovo hardware product, see “Warranty information” in the *Safety, Warranty, and Setup Guide* that comes with your computer.

If possible, be near your computer when you make your call in case the technical assistance representative needs to help you resolve a computer problem. Ensure that you have downloaded the most current drivers and system updates, run diagnostics, and recorded information before you call. When calling for technical assistance, have the following information available:

- Machine type and model
- Serial numbers of your computer, monitor, and other components, or your proof of purchase
- Description of the problem
- Exact wording of any error messages
- Hardware and software configuration information for your system

## Telephone numbers

For a list of the Lenovo Support phone numbers for your country or region, go to <http://www.lenovo.com/support/phone> or refer to the *Safety, Warranty, and Setup Guide* that comes with your computer.

**Note:** Phone numbers are subject to change without notice. The latest phone numbers are available at <http://www.lenovo.com/support/phone>. If the number for your country or region is not provided, contact your Lenovo reseller or Lenovo marketing representative.

## **Finding ThinkPad options**

If you want to expand the capabilities of your computer, Lenovo has a number of hardware accessories and upgrades to meet your needs. Options include memory modules, storage devices, network cards, port replicators or docking stations, batteries, power adapters, printers, scanners, keyboards, mice, and more.

You can shop at Lenovo 24 hours a day, 7 days a week directly over the World Wide Web. All you need is an Internet connection and a credit card.

To shop at Lenovo, go to:  
<http://www.lenovo.com/essentials>

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## **Purchasing additional services**

During and after the warranty period, you can purchase additional services, such as support for Lenovo and non-Lenovo hardware, operating systems, and application programs; network setup and configuration services; upgraded or extended hardware repair services; and custom installations services. Service availability and service name might vary by country.

For more information about these services, go to:  
<http://www.lenovo.com/essentials>





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## Appendix A. Regulatory information

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### Wireless related information

#### Wireless interoperability

The Wireless LAN PCI Express Mini Card is designed to be interoperable with any wireless LAN products that are based on DSSS, CCK, and/or OFDM radio technology, and are compliant to:

- The 802.11b/g Standard, 802.11a/b/g or 802.11n on Wireless LANs, as defined and approved by the Institute of Electrical and Electronics Engineers.
- The WiFi certification as defined by the Wi-Fi Alliance.

A Bluetooth device is designed to be interoperable with any Bluetooth products that are compliant to Bluetooth Specification 4.0 as defined by the Bluetooth SIG. Your computer can connect to a range of devices, but connectivity might depend on the type and manufacturer of the device. These devices include the following:

- Headphones
- Headsets
- Keyboards
- Mice
- Microphones
- Speakers

#### Usage environment and your health

Integrated wireless cards emit radio frequency electromagnetic energy like other radio devices. However, the level of energy emitted is far much less than the electromagnetic energy emitted by wireless devices like for example mobile phones.

Due to the fact that integrated wireless cards operate within the guidelines found in radio frequency safety standards and recommendations, Lenovo believes they are safe for use by consumers. These standards and recommendations reflect the consensus of the scientific community and result from deliberations of panels and committees of scientists who continually review and interpret the extensive research literature.

In some situation or environment, the use of integrated wireless cards might be restricted by the proprietor of the building or responsible representatives of the organization. These situations and areas might for example include:

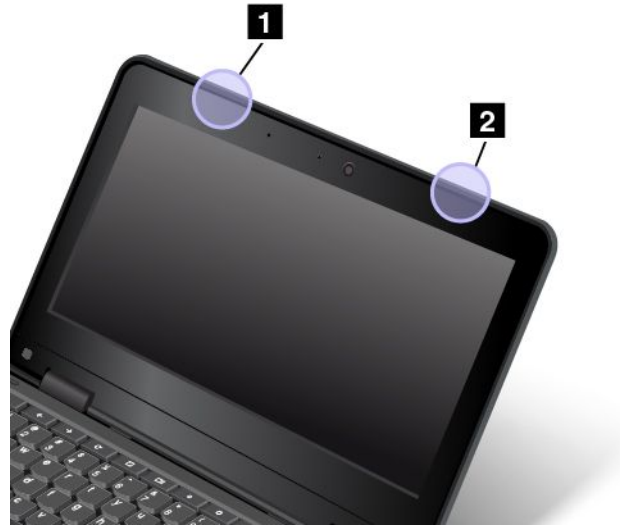
- Using the integrated wireless cards on board of airplanes, in hospitals or near petrol stations, blasting areas (with electro-explosive devices), medical implants or body-worn electronic medical devices, such as pace makers.
- In any other environment where the risk of interference to other devices or services is perceived or identified as harmful.

If you are uncertain of the policy that applies to the use of wireless devices in a specific organization (such as airport or hospital), you are encouraged to ask for authorization to use integrated wireless cards prior to turning on the computer.

## Locating the UltraConnect wireless antennas

ThinkPad notebook computers feature an UltraConnect™ wireless antenna system built into the display for optimal reception, which enables you to establish wireless communications wherever you are.

**Note:** Your computer might look slightly different from the illustration in this topic.



**1** Wireless-LAN antenna (auxiliary)

**2** Wireless-LAN antenna (main)

## Locating wireless regulatory notices

For more information about the wireless regulatory notices, refer to the *Regulatory Notice* shipped with your computer.

If your computer is shipped without the *Regulatory Notice*, you can find it on the Web site at:  
<http://www.lenovo.com/UserManuals>

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## Export classification notice

This product is subject to the United States Export Administration Regulations (EAR) and has an Export Classification Control Number (ECCN) of 4A994.b. It can be re-exported except to any of the embargoed countries in the EAR E1 country list.

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## Electronic emission notices

## Federal Communications Commission Declaration of Conformity

The following information refers to the ThinkPad 11e Chromebook and ThinkPad Yoga 11e Chromebook, machine types 20DB and 20DU.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference

to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult an authorized dealer or service representative for help.

Lenovo is not responsible for any radio or television interference caused by using other than specified or recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Responsible Party:

Lenovo (United States) Incorporated  
1009 Think Place - Building One  
Morrisville, NC 27560  
Phone Number: 919-294-5900



## Industry Canada Class B emission compliance statement

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

## European Union - Compliance to the Electromagnetic Compatibility Directive

This product is in conformity with the protection requirements of EU Council Directive 2004/108/EC on the approximation of the laws of the Member States relating to electromagnetic compatibility. Lenovo cannot accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product, including the installation of option cards from other manufacturers.

This product has been tested and found to comply with the limits for Class B Information Technology Equipment according to European Standard EN 55022. The limits for Class B equipment were derived for typical residential environments to provide reasonable protection against interference with licensed communication devices.

EU contact: Lenovo, Einsteinova 21, 851 01 Bratislava, Slovakia



## German Class B compliance statement

Deutschsprachiger EU Hinweis:

### **Hinweis für Geräte der Klasse B EU-Richtlinie zur Elektromagnetischen Verträglichkeit**

Dieses Produkt entspricht den Schutzanforderungen der EU-Richtlinie 2004/108/EG (früher 89/336/EWG) zur Angleichung der Rechtsvorschriften über die elektromagnetische Verträglichkeit in den EU-Mitgliedsstaaten und hält die Grenzwerte der EN 55022 Klasse B ein.

Um dieses sicherzustellen, sind die Geräte wie in den Handbüchern beschrieben zu installieren und zu betreiben. Des Weiteren dürfen auch nur von der Lenovo empfohlene Kabel angeschlossen werden. Lenovo übernimmt keine Verantwortung für die Einhaltung der Schutzanforderungen, wenn das Produkt ohne Zustimmung der Lenovo verändert bzw. wenn Erweiterungskomponenten von Fremdherstellern ohne Empfehlung der Lenovo gesteckt/eingebaut werden.

### **Deutschland:**

#### **Einhaltung des Gesetzes über die elektromagnetische Verträglichkeit von Betriebsmitteln**

Dieses Produkt entspricht dem „Gesetz über die elektromagnetische Verträglichkeit von Betriebsmitteln“ EMVG (früher „Gesetz über die elektromagnetische Verträglichkeit von Geräten“). Dies ist die Umsetzung der EU-Richtlinie 2004/108/EG (früher 89/336/EWG) in der Bundesrepublik Deutschland.

#### **Zulassungsbescheinigung laut dem Deutschen Gesetz über die elektromagnetische Verträglichkeit von Betriebsmitteln, EMVG vom 20. Juli 2007 (früher Gesetz über die elektromagnetische Verträglichkeit von Geräten), bzw. der EMV EG Richtlinie 2004/108/EC (früher 89/336/EWG), für Geräte der Klasse B.**

Dieses Gerät ist berechtigt, in Übereinstimmung mit dem Deutschen EMVG das EG-Konformitätszeichen - CE - zu führen. Verantwortlich für die Konformitätserklärung nach Paragraf 5 des EMVG ist die Lenovo (Deutschland) GmbH, Gropiusplatz 10, D-70563 Stuttgart.

Informationen in Hinsicht EMVG Paragraf 4 Abs. (1) 4:

**Das Gerät erfüllt die Schutzanforderungen nach EN 55024 und EN 55022 Klasse B.**

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## **Eurasian compliance mark**



Модели, относящиеся к настоящей серии (семейству) продуктов и впервые выпущенные в обращение до 14 февраля 2013 года, сертифицированы по требованиям Системы сертификации ГОСТ Р и/или по требованиям единой системы сертификации Таможенного Союза, действовавшим в момент сертификации, и маркируются знаком соответствия ГОСТ Р.

Модели, относящиеся к настоящей серии (семейству) продуктов и впервые выпущенные в обращение после 14 февраля 2013 года, сертифицированы в единой системе сертификации Таможенного Союза на соответствие требованиям применимых Технических Регламентов и маркируются знаком EAC.

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## **Brazil regulatory notice**

Ouvir sons com mais de 85 decibéis por longos períodos pode provocar danos ao sistema auditivo.

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## **Mexico regulatory notice**

**Advertencia:** En Mexico la operación de este equipo está sujeta a las siguientes dos condiciones: (1) es posible que este equipo o dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada.

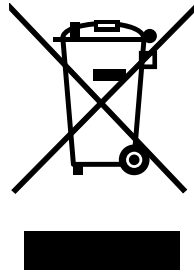
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## Appendix B. WEEE and recycling information

Lenovo encourages owners of information technology (IT) equipment to responsibly recycle their equipment when it is no longer needed. Lenovo offers a variety of programs and services to assist equipment owners in recycling their IT products. For information on recycling Lenovo products, go to: <http://www.lenovo.com/recycling>

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### Important WEEE information



The WEEE marking on Lenovo products applies to countries with WEEE and e-waste regulations (for example, European Directive 2002/96/EC, India E-Waste Management & Handling Rules, 2011). Appliances are labeled in accordance with local regulations concerning waste electrical and electronic equipment (WEEE). These regulations determine the framework for the return and recycling of used appliances as applicable within each geography. This label is applied to various products to indicate that the product is not to be thrown away, but rather put in the established collection systems for reclaiming these end of life products.

Users of electrical and electronic equipment (EEE) with the WEEE marking must not dispose of end of life EEE as unsorted municipal waste, but use the collection framework available to them for the return, recycle, and recovery of WEEE and to minimize any potential effects of EEE on the environment and human health due to the presence of hazardous substances. For additional WEEE information go to: <http://www.lenovo.com/recycling>

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### Recycling information for Brazil

#### Declarações de Reciclagem no Brasil

#### Descarte de um Produto Lenovo Fora de Uso

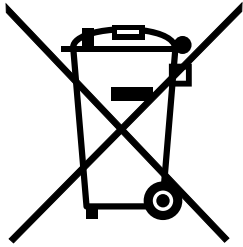
Equipamentos elétricos e eletrônicos não devem ser descartados em lixo comum, mas enviados à pontos de coleta, autorizados pelo fabricante do produto para que sejam encaminhados e processados por empresas especializadas no manuseio de resíduos industriais, devidamente certificadas pelos órgãos ambientais, de acordo com a legislação local.

A Lenovo possui um canal específico para auxiliá-lo no descarte desses produtos. Caso você possua um produto Lenovo em situação de descarte, ligue para o nosso SAC ou encaminhe um e-mail para: [reciclar@lenovo.com](mailto:reciclar@lenovo.com), informando o modelo, número de série e cidade, a fim de enviarmos as instruções para o correto descarte do seu produto Lenovo.

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## Battery recycling information for the European Union

EU



**Notice:** This mark applies only to countries within the European Union (EU).

Batteries or packaging for batteries are labeled in accordance with European Directive 2006/66/EC concerning batteries and accumulators and waste batteries and accumulators. The Directive determines the framework for the return and recycling of used batteries and accumulators as applicable throughout the European Union. This label is applied to various batteries to indicate that the battery is not to be thrown away, but rather reclaimed upon end of life per this Directive.

In accordance with the European Directive 2006/66/EC, batteries and accumulators are labeled to indicate that they are to be collected separately and recycled at end of life. The label on the battery may also include a chemical symbol for the metal concerned in the battery (Pb for lead, Hg for mercury, and Cd for cadmium). Users of batteries and accumulators must not dispose of batteries and accumulators as unsorted municipal waste, but use the collection framework available to customers for the return, recycling, and treatment of batteries and accumulators. Customer participation is important to minimize any potential effects of batteries and accumulators on the environment and human health due to the potential presence of hazardous substances. For proper collection and treatment, go to:  
<http://www.lenovo.com/lenovo/environment>

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## Battery recycling information for the United States and Canada



US & Canada Only

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## Appendix C. Restriction of Hazardous Substances Directive (RoHS)

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### European Union RoHS

Lenovo products sold in the European Union, on or after 3 January 2013 meet the requirements of Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (“RoHS recast” or “RoHS 2”).

For more information about Lenovo progress on RoHS, go to:  
[http://www.lenovo.com/social\\_responsibility/us/en/RoHS\\_Communication.pdf](http://www.lenovo.com/social_responsibility/us/en/RoHS_Communication.pdf)

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### Turkish RoHS

The Lenovo product meets the requirements of the Republic of Turkey Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (EEE).

#### Тьркие EEE Үцнетмелипине Уйgunluk Beyanэ

Вu Lenovo ьгьль, Т.С. Зевре ве Орман Bakanлэрэ'нэн “Elektrik ve Elektronik Еюyalarda Вазэ Zararlэ Maddelerin Kullanэмэнэн Сэнэрландэрэлмасэна Dair Үцнетмелик (EEE)” direktiflerine uygundur.

EEE Үцнетмелипине Уygundur.

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### Ukraine RoHS

Цим пiдтверджуемо, що продукцiя Леново вiдповiдає вимогам нормативних актiв України, якi обмежують вiмiст небезпечних речовин





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## Appendix D. ENERGY STAR model information



ENERGY STAR® is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy aimed at saving money and protecting the environment through energy efficient products and practices.

Lenovo is proud to offer our customers products with the ENERGY STAR qualified designation. Lenovo computers of the following machine types, if the ENERGY STAR mark is affixed, have been designed and tested to conform to the ENERGY STAR program requirements for computers.

20DB and 20DU

By using ENERGY STAR qualified products and taking advantage of the power-management features of your computer, you can help reduce the consumption of electricity. Reduced electrical consumption can contribute to potential financial savings, a cleaner environment, and the reduction of greenhouse gas emissions.

For more information about ENERGY STAR, go to:  
<http://www.energystar.gov>

Lenovo encourages you to make efficient use of energy an integral part of your day-to-day operations. To help in this endeavor, Lenovo has preset the following power-management features to take effect when your computer has been inactive for a specified length of time:

**Power plan: Energy Saver (settings when plugged into ac power)**

- Turn off the display: After 10 minutes
- Put the computer into sleep: After 20 minutes
- Advanced power settings:
  - Turn off hard disks: After 15 minutes
  - Hibernate: Never

To awaken your computer from sleep mode, open the computer lid.



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## Appendix E. Notices

Lenovo may not offer the products, services, or features discussed in this document in all countries. Consult your local Lenovo representative for information on the products and services currently available in your area. Any reference to a Lenovo product, program, or service is not intended to state or imply that only that Lenovo product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any Lenovo intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any other product, program, or service.

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Any references in this publication to non-Lenovo Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this Lenovo product, and use of those Web sites is at your own risk.

Any performance data contained herein was determined in a controlled environment. Therefore, the result obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

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The following terms are trademarks of Lenovo in the United States, other countries, or both:

- Lenovo
- ThinkPad
- ThinkPad logo
- UltraConnect
- Yoga

Chromebook and Chrome OS are trademarks of Google Inc.

Intel and Intel Celeron are trademarks of Intel Corporation or its subsidiaries in the U. S. and/or other countries.

The terms HDMI and HDMI High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.

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**ThinkPad®**