Important Safety Information

Before using this manual, it is important that you read and understand all of the related safety information for this product. Refer to the Safety and Warranty Guide that you received with this product for the latest safety information. Reading and understanding this safety information reduces the risk of personal injury or damage to your product.

The interface and functions shown in this User Guide are provided for reference only and may differ from actual product appearance. Product design and specifications may be changed without notice.

⚠️ Danger: Be aware of extremely hazardous or potentially lethal situations.

🔥 Attention: Be aware of possible damage to programs, devices, or data.

⚠️ Note: Pay attention to this important information.
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This chapter contains the following topics:

- Introduction to the computer hardware
- Information on computer connections

⚠️ Note: The descriptions in this chapter might be different from what you see on your computer, depending on the computer models and configurations.
1.1 Front view of the computer

Attention: Be careful not to block any air vents on the computer. Blocked air vents can cause overheating.

1. Built-in microphone
2. Built-in camera
3. Power indicator
4. Hard disk drive indicator
5. Bluetooth status indicator
6. WIFI status indicator
7. HDMI-in indicator
8. Built-in speakers
9. Monitor On/Off
10. PC mode / HDMI-in / AV-in switch
11. Novo Vision button
12. Volume down
13. Volume up
14. Brightness down
15. Brightness up
1.2 Left and right view of the computer

1. Air vents
2. USB 3.0 connector
3. HDMI-in connector (selected models only)
4. HDMI-out connector
5. Eject button
6. Optical drive
7. B-CAS card slot (Japan models only)
8. Memory card reader
9. Power button
10. Anti-scratch protector

⚠️ Attention: Do not insert 3-inch discs into the optical drive.
1.3 B-CAS card installation (Japan models only)
1.4 Rear view of the computer

1. TV tuner connector (selected models only, 2 connectors for Japan)
2. Headphone connector
3. Microphone connector
4. USB 3.0 connector
5. USB 2.0 connectors (2)
6. Power connector
7. Ethernet connector
8. Security cable slot
1.5 Computer stand

Use the stand to position the display to your preference. It can be rotated 5° forward and 90° backward.

⚠️ **Attention:** Ensure the anti-scratch protector is always on the hinge bar when using the computer in a horizontal position.
1.6 Connecting your computer

⚠️ Note: Your computer may not have all of the connectors described in this section.

1.6.1 Basic connector instructions

<table>
<thead>
<tr>
<th>Connector</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microphone</td>
<td>Use this connector to attach a microphone to your computer when you want to record sound or if you use speech-recognition software.</td>
</tr>
<tr>
<td>Headphone</td>
<td>Use this connector to attach headphones to your computer when you want to listen to music or other sounds without disturbing anyone.</td>
</tr>
<tr>
<td>USB connector</td>
<td>Use this connector to attach a device that requires a USB connection.</td>
</tr>
<tr>
<td>Ethernet connector</td>
<td>Use this connector to attach the computer to an Ethernet-type local area network.</td>
</tr>
<tr>
<td>HDMI connector (optional)</td>
<td>Connects to the HDMI connector on your display or TV.</td>
</tr>
<tr>
<td>TV-Tuner connector (optional)</td>
<td>Connects to an external antenna to view programs using the optional TV tuner card.</td>
</tr>
</tbody>
</table>

⚠️ Note: If your computer is equipped with a wireless keyboard or mouse, follow the installation instructions for those devices.
1.6.2 Connecting the power cord
1.7 Important information about using the computer

Press the power button on the side of the computer to turn on the computer.

⚠️ **Note:** The buttons at the bottom of the screen are touch buttons. Touching them turns on the indicator lights.
Hold the computer tightly when you carry it.

⚠️ **Attention:** Do not place your computer face-down as shown below.
This chapter contains the following topics:

- Touch Screen Calibration
- User Gesture Instructions for the Touch screen
- Attentions when using the Touch Screen
The monitor is touch-sensitive thanks to its touch-sensitive screen. A touch screen is an input device just like a mouse or a keyboard, and the user’s fingers transmit position information via the touch screen to the computer. With this technology, you only need to touch the pictures or words on the computer display lightly with your finger, and the computer will react.

2.1 Touch Screen Calibration

Prior to first use or whenever the touch screen reacts in a different place where you are touching it, start the calibration program. The procedure is as follows:
1. In Windows 7, Select “Start” – “Control Panel”.
2. In Control Panel, select “Hardware and Sound”.
3. In “Hardware and Sound” window, select “Tablet PC Settings”.
4. In “Tablet PC Settings” dialogue, click “Calibrate” button.

2.2 User Gesture Instructions for the Touch screen

The Touch screen supports single touch and rotational movements, enlargement and reduction multi-touch operations, and the user can transmit position information to the computer via touch. The touch screen uses a very low pressure movement recognition method, which only needs the finger to move lightly on the computer display screen or make a simple hand gesture to be detected by the main computer processor.

2.2.1 Basic Hand Gestures

1. Single Click / Double Click
For the item selected on the touch screen, with one finger touch it one or two times, to perform a single click or double click operation. This is similar to the action performed by clicking the mouse left button.
2. Single Finger Right Click
For the item selected on the touch screen, press and hold your finger on the screen until a circle appears. After lifting your finger from the touch screen, a menu bar will pop up, completing the single finger right click operation. This is similar to the action performed by clicking the mouse right button.
3. Double Finger Right Click
First touch a finger to the screen to select the desired item and hold it there, then touch another finger anywhere nearby on the screen and quickly lift it up again, to complete a double finger right click operation. The area where the first finger is placed can be used to show the right-click menu or perform related operations.

4. Dragging Movement
First touch your finger on the desired item on the screen and hold it there, then make a dragging movement. This is similar to the click and drag movement you can make with a mouse.
5. High Speed Slide

If you touch the screen with a single finger and slide it a short distance horizontally (about 5 cm), then quickly lift it up again, this is called a High Speed Slide, and the screen will show the “Forward” or “Back” icon.

In the default situation, a high speed horizontal sliding movement will execute a forward or back operation. For example: Forward and Back operations for the IE browser; or Previous and Next slide operations in Windows Photo Viewer slideshow mode.

6. Rolling Movement

When you move your finger one time vertically (or horizontally) on the touch screen, this is called a Rolling Operation. For example: This operation is similar to moving the scroll wheel on the top of a mouse, and produces the same results as the scroll wheel interface does.
7. Zoom Operation

Touch two fingers lightly on the desired item on the touch screen, then keeping both fingers on the screen, change the distance between them. By increasing (or decreasing) the distance, you can perform a zoom out (or zoom in) operation. For example: you can enlarge or reduce the picture size in Windows Photo Viewer.

8. Rotation Operation

Use two figures to touch the desired item on the touch screen, then rotate them in the desired direction. For example: you can rotate the picture which is being displayed in Windows Photo Viewer.
2.2.2 Related Touch Screen Settings

1. Flicks: In the notification area of the taskbar at the bottom of the screen, click on the Flicks icon, and the current Flicks window will appear. Click once anywhere in this window to enter Flicks Training. The user can perform operations according to the advice given on screen.
2. For more detailed configuration, you can click on the Flicks icon in the notification area of the taskbar at the bottom of the screen, then click on “Customize your flicks setting” in the Flicks pop-up window. In the “Pen and Touch” window, the user can adjust more settings related to “Pen and Touch” according to their specific preferences.

On the Flicks menu you can:

- Select commonly used Flicks operation groups
- Adjust the sensitivity of the touch screen
On the Touch menu you can:

- Enable / disable options such as “Use your finger as an input device” and “Enable multi-touch gestures and inking”.
- Select touch actions which you wish to adjust. By clicking on “Settings”, you can adjust the “Speed” and “Spatial tolerance” parameters, to match the user’s natural way of double-clicking. You can double-click on the lower right corner of the icon to test this.
- Enable / disable touch Pointer.

⚠️ **Note:** Users can access more help information from the Windows “Help and Support” menu.
2.3 Precautions when using the Touch Screen

1. When using the touch screen, be careful not to tear the surface with any sharp objects.

2. To ensure normal use of the touch screen, ensure that both the screen surface and your fingers are clean and dry.

3. To ensure precise positioning on the touch screen, avoid handling or touching the glass frame when you are touching the screen.

4. Turn the computer off for safety before cleaning the screen and frame with a soft cotton cloth. Do not wipe it with a wet cloth as this may leave a water mark and affect touch operation.

5. Avoid using the touch screen in dusty environments or hot or humid conditions. Any abrupt temperature change may cause condensation on the inside surface of the glass screen, which will disappear after a short time and does not affect normal use.

⚠️ Note: The touch screen will not affect other computer processes when used normally.

6. Recognition of touch gestures can be influenced by the following:
   • Touching the correct place on the screen.
   • The speed of movement.
   • The time interval from when the screen was last touched.

⚠️ Note: The user can consult this manual and also the related Windows help content to learn accurate hand gestures.
7. The touch screen does not function in Rescue System mode.
8. The touch screen also does not function during the startup process, in Hibernate mode and in Sleep mode or Safe mode.
This chapter contains the following topics:

- OneKey Recovery
- Driver and Application Installation
- System Setup
- System Backup
- System Recovery
- Create Recovery Disc

⚠️ Attention: Using this program will result in loss of data.

- You can restore the C: drive of the computer to factory default settings or to the last system backup status using OneKey Recovery. If you do this, all of the existing data on drive C: will be lost, but the content and format of the other partitions of the hard disk drive will remain unchanged.

- If you want to install an operating system and back it up with OneKey Recovery, you must format the C: partition in NTFS format and install the operating system on the C: partition. Otherwise, the OneKey Recovery system cannot run.
Note about the service partition:

The files and relevant data used by the rescue system are saved in the service partition. Deleting this partition will make the rescue system unusable. For more detailed information, see the following instructions.

By selecting Control Panel → Administrative Tools → Computer Management → Disk Management, you can see the service partition, which must not be deleted.

⚠️ Note: The recovery files and relevant data used by the rescue system are saved in the service partition. If the service partition is deleted or damaged by someone other than authorized Lenovo service personnel, Lenovo will not be liable for any losses arising therefrom in any way.

3.1 OneKey Recovery

OneKey Recovery is an easy-to-use application. You can use it to restore your computer to the system default or to a previously backed up state.

Detailed Operation Procedure

1. Repeatedly press and release the F2 key after turning on the computer until the Lenovo Rescue System opens, then select OneKey Recovery.

⚠️ Note: System Recovery will overwrite all of the data on the C: drive. To prevent loss of data, be sure to back up relevant data before performing system recovery.

2. Follow the on-screen instructions to select the backup task you want to restore from and the disk where you want to install the operating system, then press Next to start the restore.

3. Please wait during the process of system recovery. Do not interrupt the operation during the recovery process.

4. After the system is recovered successfully, the software will prompt you to restart the computer. Restart the computer and start the operating system.

3.2 Driver and Application Installation

The Driver and Application Installation function in the rescue system provides a way for the user to conveniently reinstall all of the Lenovo applications and drivers that were shipped with your Lenovo hardware.
Method 1: Automatic Installation
Repeatedly press and release the F2 key after turning on the computer until the Lenovo Rescue System opens, then select Drivers and Application Installation.

Follow the on-screen prompts to install the Lenovo drivers and applications. Click Install to start installing the Lenovo Drivers and Application Installation software.

The system will restart. After the system has restarted, the installation process will continue until it has completed.

Method 2: Manual Installation
In the Windows system, Click Start → All Programs → Lenovo → Lenovo Drivers and Application Installation.
After starting the procedure, install all the drivers and software manually by following the prompts.

⚠️ Notes:
1. Do not install software which is already installed on the computer.
2. Make sure that the Drivers and Application Installation software has been automatically installed before starting the operating system. The manual installation function can only be used after the software has been installed.

3.3 System Setup
System Setup configures the network configuration for the Lenovo Rescue System to ensure your Rescue System can connect to internet. In addition, System Setup sets and manages all passwords for the Lenovo Rescue system.

3.3.1 Launch
Repeatedly press and release the F2 key after turning on the computer until the Lenovo Rescue System opens, then select System Setup.

3.3.2 Network Settings
Depending on the network access mode of the computer, select “ADSL” or “LAN Connection” in the network connection modes.
1. If you select “ADSL” input the user name and password of the ADSL connection.
2. If you select “LAN connection” configure the IP address and proxy server of the LAN.
3.3.3 Password Management

Password Management allows you to set and manage the password for Lenovo Rescue System.

The default password is blank.

Set a password when you access Password Management for the first time. If you don’t want to set a password, access the system directly and use it accordingly.

3.4 System Backup

This backs up your system partition to an image file. In case of a system failure, you can restore your system from this image file.

In the Windows system, click Start → All Programs → Lenovo → Lenovo Rescue System.
After starting Rescue System, click System Backup to back up your system partition by following the prompts.

3.5 System Recovery

Reboot your computer into the system recovery environment. You can choose to restore to a system backup point or the initial state (factory default settings).

3.6 Create Recovery Disc

Create a bootable recovery disc from the current system. These recovery discs are used to boot your computer and will guide you through the entire restoration process.

In the Windows system, click Start → All Programs → Lenovo → Lenovo Rescue System.
After starting Rescue System, click Create Recovery Disc to create a bootable recovery disc from the current system.

Follow the on-screen prompts to create a recovery disc.
This chapter contains the following topic:

- Troubleshooting and Problem Resolution

⚠️ Note: The description of the TV tuner card in this manual is only applicable to machines which have the TV tuner card. It does not apply to machines that do not have a TV tuner card.
Solving Problems

Follow these tips when troubleshooting your computer:

- If you added or removed a part before the problem started, review the installation procedures to ensure that the part is correctly installed.
- If a peripheral device does not work, ensure that the device is properly connected.
- If an error message appears on the screen, write down the exact message. This message may help support personnel diagnose and fix the problem(s).
- If an error message occurs in a program, see the program’s documentation.

4.1 Troubleshooting Display Problems

Problem: Blank screen or no image is displayed on the monitor.

Troubleshooting and problem resolution:
Check that the LCD screen has been turned on; if not, press the LCD On/Off button to turn on the LCD.
If still cannot solve the problem, contact Lenovo Customer Service.

Problem: You need to change the display property settings.

Setting display background and icon properties:
1. Right-click the desktop anywhere except over an icon, then select Personalize from the pop-up menu.
2. From here, select the appropriate options to:
   - Change the desktop background
   - Select a screen saver
   - Select colors and appearance options for icons and text
   - Set resolution and colors in the Display Settings options

Problem: Ripple on screen.

Troubleshooting and problem resolution:
1. Check to see if any of the following devices are located less than one meter from the computer: refrigerators, electric fans, electric dryers, UPS systems, regulators, fluorescent lamps or other computers that may be generating magnetic interference.
2. Move any interfering devices away from the computer.
3. If the problem persists, contact Lenovo Service.
4.2 Troubleshooting Touch screen

Problem: The touch screen reacts, but not where you are touching it.

Troubleshooting and problem resolution:

Touch Screen Calibration:
1. In Windows 7, Select “Start” – “Control Panel”.
2. In Control Panel, select “Hardware and Sound”.
3. In “Hardware and Sound” window, select “Tablet PC Settings”.
4. In “Tablet PC Settings” dialogue, click “Calibrate” button.

4.3 Troubleshooting Audio Problems

Problem: No sound from the integrated speakers.

Troubleshooting and problem resolution:

- Adjust the Windows volume control — double-click the speaker icon in the lower-right corner of your screen. Ensure that the volume is turned up and the sound is not muted. Adjust the volume, bass, or treble controls to eliminate distortion.
- Reinstall the audio driver.
- Disconnect any headphones from the headphone connector — sound from the speakers is automatically disabled when headphones are connected to the computer’s side-panel headphone connector.

Problem: No sound from headphones.

Troubleshooting and problem resolution:

- Check the headphone cable connection — ensure that the headphone cable is securely inserted into the headphone connector.
- Adjust the Windows volume control — click or double-click the speaker icon in the lower-right corner of your screen. Ensure that the volume is turned up and the sound is not muted.

4.4 Troubleshooting Software Problems

Problem: You are unable to exit a running program normally.

Troubleshooting and problem resolution:

1. Open the Task Manager window by pressing Ctrl, Alt and Delete at the same time.
2. Select the **Application** tab, select the problem program, then click the **End Task** button.

**Problem:** You need to install or uninstall a program.

**Problem resolution:**

*During installation* never abort the install process by powering the system off or through other drastic means. This can cause system program problems or even failure during system initialization.

*During the uninstall process*, never directly delete the files or folders. This is harmful to the operating system, and might cause a system-wide malfunction.

Use the following procedure to properly uninstall programs:

1. Back up all documents and system settings related to the program before removing it.

2. If the program has its own uninstaller, run it directly to uninstall the program.

3. If the program does not have its own uninstaller, then select **Control Panel** from the **Start** menu.

4. From the **Control Panel**, choose **Programs and Functions**.

5. Find the applicable program from the **Programs and Functions** dialog box and then select **Uninstall/Modify**.

6. Perform the instructions displayed to uninstall the software.

### 4.5 Troubleshooting Problems with Optical Drives and Hard Disks

**Problem:** The Optical drive is unable to read a CD/DVD.

**Troubleshooting and problem resolution:**

1. Check to determine if there is an optical drive icon in the resource manager of the operating system. If not, restart your computer. If there is still no icon, contact Lenovo Service. Otherwise, continue with the next step of this procedure.

2. Confirm that the CD/DVD has been properly placed in the drive. If not, reload the CD or DVD. Otherwise, continue with the next step of this procedure.

3. Check the specifications that came with your computer to confirm that this optical drive is capable of reading this type of CD or DVD.

4. If the CD/DVD cannot be read, replace it with a known good CD/DVD such as one that was shipped with the computer.
5. If the known good CD cannot be read, visually check the operating side of the CD/DVD for defects.

**Problem:** The capacity of the hard disk, as indicated by the system, is less than the nominal capacity.

**Troubleshooting and problem resolution:** For computers equipped with the OneKey Recovery feature, the system recovery feature needs to occupy some hard disk space. This may account for the apparent hard disk capacity deficit.

**Further Technical Explanation:** The nominal capacity of the hard disk is expressed in the decimal system as 1000 bytes. But the actual hard disk capacity is expressed in the binary system as 1024 bytes (For example, the nominal capacity 1G is 1000M, while the actual capacity 1G is 1024M).

The capacity of the hard disk shown in Windows can be calculated according to the calculations in the following example:

   The nominal capacity of the hard disk is 40G, while its actual capacity should be: 40 x 1000 x 1000 x 1000/(1024 x 1024 x 1024) = 37G.

   If the Service partition of 3G - 3 x 1000 x 1000 x 1000/(1024 x 1024 x 1024) = 2.79G is subtracted, the capacity of the hard disk shown in the system can be obtained.

The capacity of the hard disk as calculated using this method may be slightly different from the actual capacity due to the rounding of totals.

### 4.6 Special considerations for troubleshooting Windows

1. Record the serial number of the computer as it may be useful later when troubleshooting system problems. The serial number was shipped with the computer and provided by Lenovo. The Help Center is unable to retrieve this number.

2. The drivers for this computer model only support the Windows 7 system.

3. When you use the Windows Media Center to watch TV, be particularly attentive to the following:
   - In the following two situations, you must re-save a channel list:
     a. When you change your TV signal from digital to analog, your saved channel list for digital TV is deleted. When you want to watch digital TV again, you must create and save a new channel list.
b. When you change your TV signal from analog to digital, your saved channel list for analog TV is deleted. When you want to watch analog TV again, you must create and save a new channel list.

- You must set the TV tuner input signal to analog before you can watch Teletext programming.

4.7 Performing Daily Maintenance Tasks

Cleaning the computer components

Because many of the computer components consist of sophisticated integrated circuit boards, it is very important to periodically clean the computer to prevent dust buildup. The cleaning supplies you need to clean the components include: a vacuum cleaner, a soft cotton cloth, pure water (preferably purified or distilled water) and cotton swabs.

⚠️ Attention: Before you clean your computer, disconnect the computer from the electrical outlet. Clean your computer with a soft cloth dampened with water. Do not use liquid or aerosol cleaners, which may contain flammable substances.

⚠️ Note: To avoid damaging the computer or display, do not spray cleaning solution directly onto the display. Only use products specifically designed for cleaning displays, and follow the instructions included with the product.

The following are general methods for cleaning the components:

- You can use a soft cloth to remove dust on the surface of the computer, the monitor, the printer, the speakers and the mouse.
- You can use a vacuum cleaner to clean in otherwise inaccessible corners.
- To clean the keyboard thoroughly, shut down the computer and scrub it gently with a wet cloth. Do not use the keyboard until it is dry.

Do not do any of the following:

- Allow water to enter the computer.
- Use a heavily dampened cloth.
- Spray water directly onto the surface of the monitor or inside the computer.

LCD monitors should be cleaned daily. Use a dry cloth to brush dust from the monitor and keyboard every day. Keep all surfaces clean and free of grease stains.
Energy Star Statement

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 an ENERGY STAR compliant designation. The following machine types have been designed and tested to conform to the ENERGY STAR program requirement for computers at the time of manufacture. For more information about ENERGY STAR ratings for Lenovo computers, go to http://www.lenovo.com.

• 10096/2564

By using ENERGY STAR compliant products and taking advantage of the power-management features of your computer, you reduce the consumption of electricity. Reduced electrical consumption contributes 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 duration:

ENERGY STAR power-management features, by operating system

<table>
<thead>
<tr>
<th>Microsoft Windows XP</th>
<th>Microsoft Windows Vista and Windows 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Turn off monitor: After 15 minutes</td>
<td>Power plan: Balanced</td>
</tr>
<tr>
<td>• Turn off hard disk drives: Never</td>
<td>• Turn off the display: After 10 minutes</td>
</tr>
<tr>
<td>• System standby: After 20 minutes</td>
<td>• Put the computer to sleep: After 25 minutes</td>
</tr>
<tr>
<td>• System hibernates: Never</td>
<td>• Advanced power settings:</td>
</tr>
<tr>
<td></td>
<td>- Turn off hard disk drives: After 20 minutes</td>
</tr>
<tr>
<td></td>
<td>- Hibernate: Never</td>
</tr>
</tbody>
</table>
To awaken your computer from a Sleep or System Standby mode, press any key on your keyboard. For more information about these settings, refer to your Windows Help and Support information system.