

User Guide



Lenovo

IdeaCentre AIO

Read this first

Before using this documentation and the product it supports, ensure that you read and understand the following:

- *Safety and Warranty Guide*
- *Generic Safety and Compliance Notices*
- *Setup Guide*

The functions of Wireless Access Systems including Radio Local Area Networks(WAS/RLANs) within the band 5150-5350 MHz for this device are restricted to indoor use only within all European Union countries.



First Edition (January 2024)

© Copyright Lenovo 2024.

LIMITED AND RESTRICTED RIGHTS NOTICE: If data or software is delivered pursuant to a General Services Administration "GSA" contract, use, reproduction, or disclosure is subject to restrictions set forth in Contract No. GS-35F-05925.

Contents

About this documentationiii
---	-------------

Chapter 1. Meet your computer.	1
---	----------

Overview	1
Rear	2
Specifications	3
USB specifications	4

Chapter 2. Get started with your computer.	5
---	----------

Access networks	5
Adjust the computer stand	5
Connect an external display	6
Use the touch screen (for selected models)	6
Face authentication (for selected models).	8
The Vantage app	8
Connect to a Bluetooth device	9
Conventional pair	9
Swift pair	9
Set the power plan	10
Off mode	10
Use software security solutions.	10

Chapter 3. CRU replacement	11
---	-----------

CRU list	11
Remove or replace a CRU.	11
Power cord and ac power adapter.	11

Chapter 4. Help and support	13
--	-----------

Find your serial number.	13
Diagnose and troubleshoot your computer	13
Troubleshoot and diagnose at Lenovo	
Support Web site	13
Hardware scan	14
Recovery	14
Call Lenovo	15
Before you contact Lenovo	15
Self-help resources	15
Purchase accessories	15
Purchase additional services.	15

Appendix A. Notices and trademarks.	17
--	-----------

◆ Operating Frequency

MT7920

Function	Frequency	EIRP Power for EU
WIFI	2.4-2.835 Ghz	18.54 dbm
	5.15-5.35 Ghz	20.08 dbm
	5.47-5.725 Ghz	20.57 dbm
	5.725-5.850 Ghz	11.36 dbm
BT	2.4-2.835 Ghz	14.12 dbm

RTL8852BE

Function	Frequency	EIRP Power for EU
WIFI	2.4-2.835 Ghz	18.21 dbm
	5.15-5.35 Ghz	20.15 dbm
	5.47-5.725 Ghz	20.47 dbm
	5.725-5.825 Ghz	11.35 dbm
BT	2.4-2.835 Ghz	14.22 dbm

Function	Frequency	EIRP Power for EU
WPT	110-148Khz	-32.80 dBua/m@10m

About this documentation

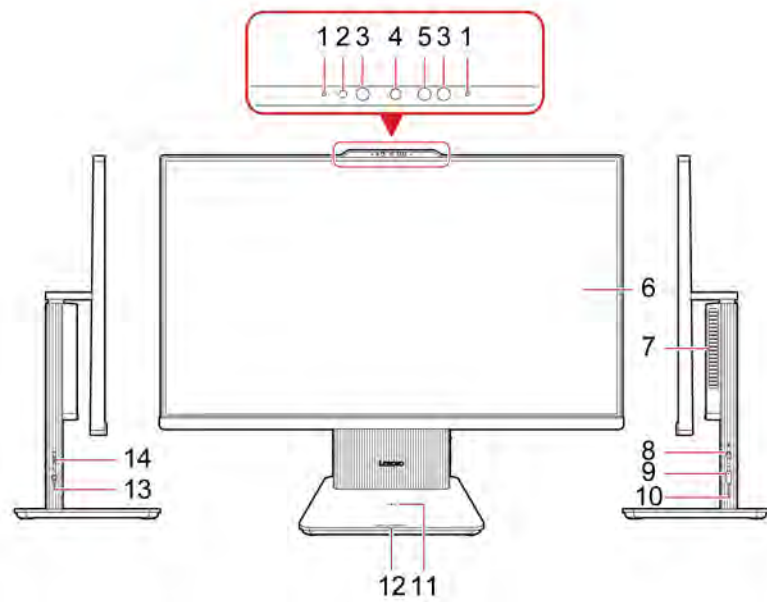
- This guide applies to the Lenovo product models listed below. Illustrations in this guide may look slightly different from your product model.

Model name	Machine types (MT)
IdeaCentre AIO 24AKP10	F0JB, F0JC
IdeaCentre AIO 27AKP10	F0JD, F0JE
ThinkCentre neo 55a 24 Gen 6	13F7, 13F8, 13F9, 13FA, F0JF, F0JG

- For more compliance information, refer to *Regulatory Notice* at <https://pcsupport.lenovo.com> and *Generic Safety and Compliance Notices* at https://pcsupport.lenovo.com/docs/generic_notices.
- Depending on the model, some optional accessories, features, and software programs might not be available on your computer.
- Depending on the version of the operating systems and programs, some user interface instructions might not be applicable to your computer.
- Documentation content is subject to change without notice. Lenovo makes constant improvements to the documentation of your computer, including this *User Guide*. To get the latest documentation, go to <https://pcsupport.lenovo.com>.
- Microsoft® makes periodic feature changes to the Windows® operating system through Windows Update. As a result, some information in this documentation might become outdated. Refer to Microsoft resources for the latest information.

Chapter 1. Meet your computer

Overview



Item	Description	Item	Description
1	Microphones	2	Integrated camera activity indicator
3	Infrared LED*	4	Integrated camera
5	Infrared camera*	6	Multi-touch screen*
7	Air vent	8	Camera switch
9	Power button indicator	10	Power button
11	Wireless charging pad*	12	Wireless charging indicator*
13	Combo audio jack	14	USB-C® (3.2 Gen 2) connector

* for selected models

Note: Place the phone horizontally on the center of the wireless charging pad to activate wireless charging.

Statement on USB transfer rate

Depending on many factors such as the processing capability of the host and peripheral devices, file attributes, and other factors related to system configuration and operating environments, the actual transfer rate using the various USB connectors on this device will vary and will be slower than the data rate listed below for each corresponding device.

USB device	Data rate (Gbit/s)
3.2 Gen 1	5
3.2 Gen 2	10
3.2 Gen 2 × 2	20

USB device	Data rate (Gbit/s)
Thunderbolt 3	40
Thunderbolt 4	40

Power indicator

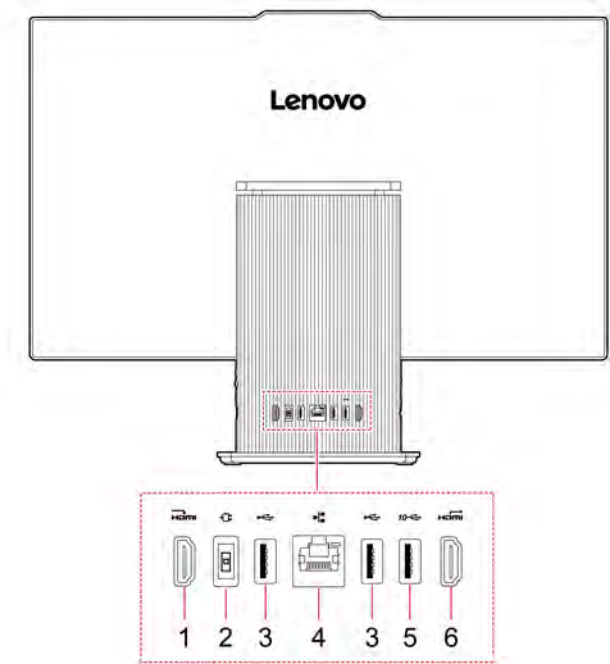
Show the system status of your computer.

- **On:** The computer is on.
- **Off:** The computer is off or in hibernation mode.
- **Blinking slowly:** The computer is in sleep mode.

Related topics

- “Use the touch screen (for selected models)” on page 6.
- “USB specifications” on page 4.

Rear



Item	Description	Item	Description
1	HDMI™ in connector	2	Power connector
3	USB-A 2.0 connectors	4	Ethernet connector
5	USB-A 3.2 Gen 2 connector	6	HDMI 2.1 TMDS out connector

Related topics

- “USB specifications” on page 4.

Specifications

Specification	Description
Hardware	To view the hardware information of your computer, type device manager in the Windows search box and then press Enter.
Power supply	<ul style="list-style-type: none">• 90-watt automatic voltage-sensing power supply*• 135-watt automatic voltage-sensing power supply*
Electrical input	<ul style="list-style-type: none">• Input voltage: From 100 V ac to 240 V ac• Input frequency: 50/60 Hz
Microprocessor	To view the microprocessor information of your computer, type system information in the Windows search box and then press Enter.
Memory	Double data rate 5 (DDR5) small outline dual in-line memory module (SODIMM)
Storage device	<ul style="list-style-type: none">• M.2 solid-state drive (SSD) <p>To view the storage drive capacity of your computer, type Disk Management in the Windows search box and then press Enter.</p> <p>Note: The storage drive capacity indicated by the system is less than the nominal capacity.</p>
Video features	<p>Maximum resolution:</p> <ul style="list-style-type: none">• HDMI out connector: 4096 × 2160 pixels, 60Hz• HDMI in connector:<ul style="list-style-type: none">– FHD: 1920 x 1080 pixels, 100 Hz– QHD: 2560 x 1440 pixels, 100 Hz
Expansion	M.2 slot × 2 (1 for Wireless LAN card, 1 for SSD)
Network features	<ul style="list-style-type: none">• Bluetooth• Ethernet LAN (Maximum speed: 1000 Mbit/s)• Wireless LAN

* for selected models

Operating environment

Maximum altitude (without pressurization)

- Operating: From 0 m (0 ft) to 3048 m (10 000 ft)
- Storage: From 0 m (0 ft) to 12192 m (40 000 ft)

Temperature






- Operating: From 5°C (41°F) to 35°C (95°F)
- Storage:
 - For common desktop computers: From -40°C (-40°F) to 60°C (140°F)
 - For all-in-one desktop computers: From -20°C (-4°F) to 60°C (140°F)

Relative humidity

- Operating: 20%-80% (non-condensing)
- Storage: 10%-90% (non-condensing)

USB specifications

Note: Depending on the model, some USB connectors might not be available on your computer.


Connector name	Description
 <ul style="list-style-type: none"> •  USB-A 2.0 connector •  USB-A 3.2 Gen 2 connector 	<p>Connect USB-compatible devices, such as a USB keyboard, USB mouse, USB storage device, or USB printer.</p>
 <ul style="list-style-type: none"> •  USB-C (3.2 Gen 2) connector 	<ul style="list-style-type: none"> • Charge USB-C compatible devices with the output voltage and current of 5 V and 3 A. • Connect to USB-C accessories to help expand your computer functionality. To purchase USB-C accessories, go to https://www.lenovo.com/accessories.

Chapter 2. Get started with your computer

Access networks

This section helps you connect to a wireless or wired network.

Connect to Wi-Fi networks

Click the network icon  on the bottom right of your display to connect to an available network. Provide required information, if needed.

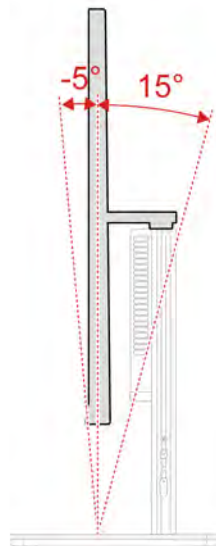
Note: The wireless LAN module on your computer may support different standards. For some countries or regions, use of 802.11ax may be disabled according to local regulations.

Connect to the wired Ethernet

Connect your computer to a local network through the Ethernet connector on your computer with an Ethernet cable.



Adjust the computer stand



Connect an external display

Connect a projector or a monitor to your computer to give presentations or expand your workspace.

Change display settings

1. Right-click a blank area on the desktop and select display settings.
2. Select the display that you want to configure and change display settings of your preference.




Use the touch screen (for selected models)

For computers with a touch-enabled screen, you can touch the screen directly with your fingers and interact with computer in a simple way. The following sections introduce frequently used touch gestures.



Notes:

- Some gestures might not be available when you are using certain apps.
- Do not use gloved fingers or incompatible pens for input on the screen. Otherwise, the touch screen might be not sensitive or does not respond.
- The touch screen is delicate. Do not apply pressure on the screen or touch the screen with anything hard or sharp. Otherwise, the touch panel might malfunction or get damaged.

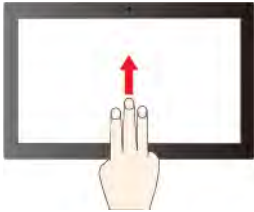
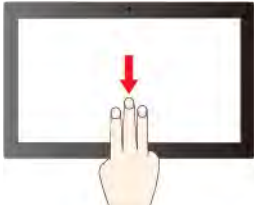
One finger touch gesture

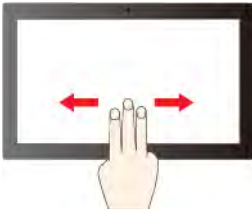
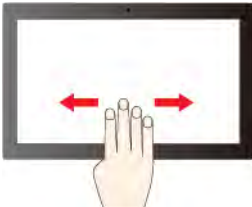
To do this	Gesture
	Tap and hold.
Open a shortcut menu.	
	Swipe from the left.
Open the widget panel.	
	Swipe from the right.
Open notification center.	

Two-finger touch gesture

To do this	Gesture
Zoom out.	<p>Move two fingers towards.</p> 
Zoom in.	<p>Spread two fingers apart.</p> 

Three- and four-finger touch gesture

To do this	Gesture
Show all open windows.	<p>Swipe with three fingers up.</p> 
Show the desktop.	<p>Swipe with three fingers down.</p> 

To do this	Gesture
Switch apps.	<p>Swipe with three fingers to the left or right.</p> 
Switch desktops.	<p>Swipe with four fingers to the left or right.</p> 

To enable three- and four-finger touch gestures, do the following:

Step 1. Type touch gesture in the Windows search box and then press Enter.

Step 2. Turn on the Three - and four-finger touch gestures switch.

Notes: If the touch screen is not sensitive or does not respond, do the following:

1. Turn off the computer.
2. Use a dry, soft, and lint-free cloth or a piece of absorbent cotton to remove fingerprints or dust from the touch screen. Do not apply solvents to the cloth.
3. Restart the computer and check if the touch screen works normally.
4. If the touch screen cannot work normally, type Windows Update in the Windows search box and then press Enter.
5. Follow the on-screen instructions to update Windows.
6. After updating Windows, check if the touch screen works normally.
7. If the touch screen still cannot work normally, the touch screen might get damaged. You can call Lenovo Customer Support Center to get further help.

Face authentication (for selected models)

Create your face ID and unlock your computer by scanning your face:

1. Type Sign-in options in the Windows search box and then press Enter.
2. Select the face ID setting and then follow the on-screen instruction to create your face ID.

The Vantage app

The Vantage app is a customized one-stop solution to help you maintain your computer with automated updates and fixes, configure hardware settings, and get personalized support.

To access the Vantage app, type Vantage in the Windows search box.

Notes:

- The available features vary depending on the computer model.
- The Vantage app makes periodic updates of the features to keep improving your experience with your computer. The description of features might be different from that on your actual user interface. You can download the latest version of Vantage app from Microsoft Store.

The Vantage app enables you to:

- Know the device status easily and customize device settings.
- Download and install UEFI BIOS, firmware, and driver to keep your computer up-to-date.
- Monitor your computer health, and secure your computer against outside threats.
- Scan your computer hardware and diagnose hardware problems.
- Look up warranty status (online).
- Access *User Guide* and helpful articles.

Connect to a Bluetooth device

You can connect all types of Bluetooth-enabled devices to your computer, such as a keyboard, a mouse, a smartphone, or speakers. To ensure successful connection, place the devices at most 10 meters (33 feet) from the computer.

Conventional pair

This topic helps you connect to a Bluetooth device by conventional pair.

- Step 1. Type **Bluetooth** in the Windows search box and then press Enter.
- Step 2. Turn on both the Bluetooth on your computer and the Bluetooth device. Make sure the device is discoverable.
- Step 3. Select the device when it is displayed on the **Add a device** list, and then follow the on-screen instructions.

Notes: If the Bluetooth connection failed, do the following:

1. Type **Device Manager** in the Windows search box and then press Enter.
2. Locate the Bluetooth adapter. Right-click and select **Update driver**.
3. Select **Search automatically for drivers**, and then follow the on-screen instructions.

Swift pair

This topic helps you connect to a Bluetooth device by swift pair.

If your Bluetooth device supports swift pair, do the following:

- Step 1. Enable swift pair notification on Bluetooth settings page.
- Step 2. Turn on both the Bluetooth on your computer and the Bluetooth device. Make sure the device is discoverable.
- Step 3. Click **Connect** when a swift pair notification appears on your computer.

Notes: If the Bluetooth connection failed, do the following:

1. Type **Device Manager** in the Windows search box and then press Enter.
2. Locate the Bluetooth adapter. Right-click and select **Update driver**.
3. Select **Search automatically for drivers**, and then follow the on-screen instructions.

Set the power plan

For ENERGY STAR® compliant computers, the following power plan takes effect when your computers have been idle for a specified duration:

- Turn off the display: After 10 minutes
- Put the computer to sleep: After 10 minutes

To awaken the computer from Sleep mode, press any key on your keyboard.

To reset the power plan:

1. Type **Power Options** in the Windows search box and then press Enter.
2. Choose or customize a power plan of your preference.

Off mode

To meet the off mode requirement of ErP/KES compliance, you need to disable the Fast Startup function. Please see details below.

1. Go to **Control Panel** and view by Large or Small icons.
2. Click **Power Options** → **Choose what the power buttons do** → **Change settings that are currently unavailable**.
3. Clear the **Turn on fast startup (recommended)** option from the **Shutdown settings** → **Save changes**.

Use software security solutions

The following software solutions help secure your computer and information.

- **Windows Security**

Windows Security is a software built-in to the operating system. It continually scans for malicious software, viruses, and other security threats. Besides, Windows updates are downloaded automatically to help keep your computer safe. Windows Security also enables you to manage tools including firewall, account protection, application and browser control, and so on.

- **Antivirus programs**

Lenovo preinstalls a full-version antivirus software on selected models of computer. It helps defend the computer against viruses, safeguard your identity, and keep your personal information secured.

- **Absolute Persistence**

Absolute Persistence technology is embedded in firmware. It detects changes that happen on the hardware, software, or the call-in location. It keeps you always knowing what condition the computer is in. To activate the technology, you have to purchase a subscription to Absolute.

Note: For more information about how to use these software solutions, refer to their help systems respectively.

Chapter 3. CRU replacement

Customer Replaceable Units (CRUs) are parts that can be replaced by the customer. Lenovo computers contain the following types of CRUs:

- **Self-service CRUs:** Refer to parts that can be replaced easily by customer themselves or by trained service technicians at an additional cost.
- **Optional-service CRUs:** Refer to parts that can be replaced by customers with a greater skill level. Trained service technicians can also provide service to replace the parts under the type of warranty designated for the customer's machine.

If you intend on installing the CRU, Lenovo will ship the CRU to you. CRU information and replacement instructions are shipped with your product and are available from Lenovo at any time upon request. You might be required to return the defective part that is replaced by the CRU. When return is required: (1) return instructions, a prepaid shipping label, and a container will be included with the replacement CRU; and (2) you might be charged for the replacement CRU if Lenovo does not receive the defective CRU within thirty (30) days of your receipt of the replacement CRU. For full details, see the Lenovo Limited Warranty documentation at:

https://www.lenovo.com/warranty/llw_02

CRU list

The following is the CRU list of your computer.

Self-service CRUs

- ac power adapter
- Keyboard
- Mouse
- Power cord

Remove or replace a CRU

This section provides instructions on how to remove or replace a CRU.

Power cord and ac power adapter

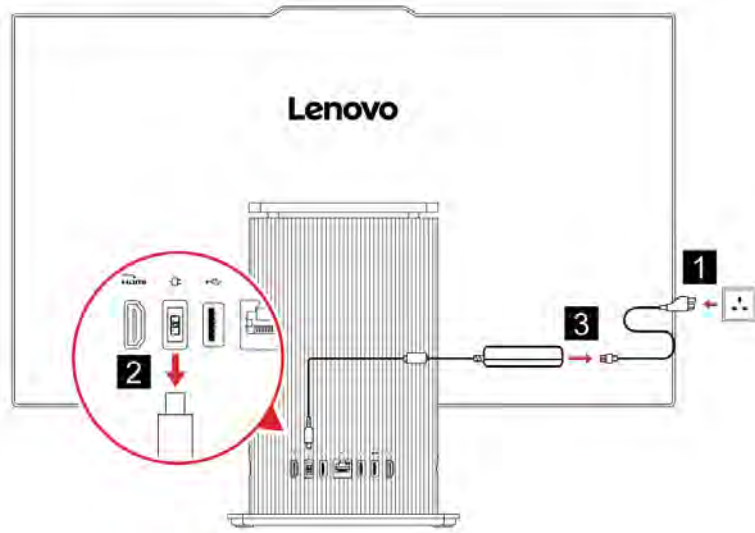
Prerequisite

Before you start, read *Generic Safety and Compliance Notices*, and print the following instructions.

Note: Do not remove the power cord when the computer is connected to ac power. Otherwise, there might be a risk of short circuits.

Removal steps

1. Turn off the computer and remove all connected devices and cables.
2. Remove the ac power adapter from the computer.
3. Remove the power cord from the ac power adapter.



Chapter 4. Help and support

Find your serial number

This topic helps you find computer serial number.

You can find your serial number via:

- **Dashboard** or **Device** in the **Vantage** app
- Serial number and machine type label of your computer (shown as below illustration)



Diagnose and troubleshoot your computer

This section provides introduction to a set of diagnostics and troubleshooting tools at Lenovo Support Web site and the Vantage app. They can help you diagnose common software and hardware issues.

The following table lists these diagnostics tools and the recommended conditions for each tool.

Diagnostics tool	Recommended scenario
Troubleshoot and diagnose at Lenovo Support Web site	You want to have an online troubleshooting or scan of hardware and drivers on your computer.
Hardware scan	<ul style="list-style-type: none">• Your computer is installed with the Vantage app.• You want to perform basic examinations of the hardware components.

Troubleshoot and diagnose at Lenovo Support Web site

Lenovo provides two different diagnosing solutions to help you identify and resolve problems on your computer.

Step 1. Go to <https://www.pcsupport.lenovo.com/> and enter your product name in the search box.

Step 2. Click **Troubleshoot & Diagnose** and select the option that fits your need.

Notes:

- Before launching any automatic diagnosing process, a pop-up window will be prompted to install Lenovo Service Bridge. Lenovo Service Bridge helps to connect your computer with Lenovo diagnosing tools.
- Lenovo Support Web site makes periodic updates of the sections to keep improving your experience with your computer. The Web site interface and descriptions of sections might be different from that on your actual interface.
- If you are unaware of what problem your computer goes with, it is recommended that you select **Easy** and follow on-screen instructions to get your firmware updated and obtain the hardware status.
- If you have identified the problem on your computer, you can select **Custom** and follow on-screen instructions to resolve the problem.

If solutions can not resolve problems on your computer, you can follow on-screen instructions to submit an e-ticket or contact Lenovo for professional assistance.

Hardware scan

Hardware scan is an effective hardware testing tool to help you identify existing hardware issues.

To run the Hardware scan:

- Step 1. Type Vantage in the Windows search box and then press Enter.
- Step 2. Click **Hardware scan** or **Support → Hardware scan**.
- Step 3. Select **QUICK SCAN** or **CUSTOMIZE** and then follow the on-screen instructions to run the hardware scan.

Notes:

- The Quick Scan tool contains a pre-selected suite of tests that performs basic examinations of the hardware components found in the system. The Customize tool enables you to select one or several hardware components to perform the examinations.
 - Before selecting **QUICK SCAN**, click **Refresh Modules** to ensure that the list of hardware components are the components currently available for the computer.
- Step 4. If any hardware failure is detected, the result varies depending on the warranty status and varies by country or region. Follow the on-screen instructions to resolve the issue.

Recovery

Use the following recovery options to reset or restore your computer when your computer comes with issues.

- Use Lenovo recovery options.
 1. Go to <https://support.lenovo.com/HowToCreateLenovoRecovery>.
 2. Follow the on-screen instructions.
- Use Windows recovery options.
 1. Go to <https://pcsupport.lenovo.com>.
 2. Detect your computer or manually select your computer model.
 3. Navigate to the troubleshooting menu to diagnose the operating system for recovery instructions.

Call Lenovo

If you have tried to correct the problem yourself and still need help, you can call Lenovo Customer Support Center.

Before you contact Lenovo

Prepare the needed information before you contact Lenovo.

1. Record the problem symptoms and details:
 - What is the problem? Is it continuous or intermittent?
 - Any error message or error code?
 - What operating system are you using? Which version?
 - Which software applications were running at the time of the problem?
 - Can the problem be reproduced? If so, how?
2. Record the system information:
 - Product name
 - Machine type and serial number.

Self-help resources

Use the following self-help resources to learn more about the computer and troubleshoot problems.

Resources	How to access?
Lenovo Support Web Site	https://pcsupport.lenovo.com
Tips	https://www.lenovo.com/tips
Lenovo Community	https://forums.lenovo.com
Accessibility information	https://www.lenovo.com/accessibility
Windows help information	<ul style="list-style-type: none">• Open the Start menu and click Get Help or Tips.• Use Windows Search or the Cortana® personal assistant.• Microsoft support Web site: https://support.microsoft.com

Purchase accessories

Lenovo has a number of hardware accessories and upgrades to help expand the capabilities of your computer. Options include memory modules, storage devices, network cards, power adapters, keyboards, mice, and more.

To shop at Lenovo, go to <https://www.lenovo.com/accessories>.

Purchase additional services

During and after the warranty period, you can purchase additional services from Lenovo at: <https://pcsupport.lenovo.com/warrantyupgrade>

Service availability and service name might vary by country or region.

- 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 the dealer or an experienced radio/TV technician for help.
- Changes or modifications not expressly approved by hp could void your authority

to operate the equipment. This device complies with Part 15 of the FCC Rules. Operation is subject to the following 2 conditions:

1 These devices may not cause harmful interference.

2 These devices must accept any interference received, including interference that may cause undesired operation.

Maintain a distance of 0 cm (0 inches) from your body to be consistent with how the device is tested for compliance with RF exposure requirements.

FCC ID contains: 2APYS-LPS15WPK

EMC COMPLIANCE STATEMENT

Important: This device [and its power adapter] have demonstrated Electromagnetic Compatibility (EMC) compliance under conditions that included the use of compliant peripheral devices and shielded cables between system components. It is important that you use compliant peripheral devices and shielded cables between system components to reduce the possibility of causing interference to radios, televisions, and other electronic devices.

RADIO FREQUENCY EXPOSURE

This device meets the U.S. Federal Communications Commission's (FCC) requirements for exposure to radio waves and is designed and manufactured not to exceed the FCC's emission limits for exposure to radiofrequency (RF) energy. To comply with FCC RF exposure compliance requirements, this device must not be co-located or operating in conjunction with any other antenna or transmitter.

Innovation, Science and Economic Development (ISED) Canada Regulatory Compliance

IC ID contains: 23965-LPS15WPK

INDUSTRY CANADA, CLASS B

This Class B digital apparatus complies with CAN ICES-003(B)/NMB-003(B).

Innovation, Science and Economic Development Canada (ISED Canada)/Innovation, Sciences et Développement économique Canada Industry Canada/Industrie

This device complies with ISED's licence-exempt RSSs. Operation is subject to the following two conditions: (1) This device may not cause interference; and (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'ISED Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Radio Frequency Exposure/Exposition aux radiofréquences

The output power of the radio technology used in the Device is below the radio frequency exposure limits set by ISED for an uncontrolled environment.

Maintain a distance of 0 cm from your body to be consistent with how the device is tested for compliance with RF exposure requirements.

La puissance de sortie de la technologie radio utilisée dans le périphérique est inférieure aux limites d'exposition aux fréquences radio définies par ISED Canada pour un environnement non contrôlé.

Maintenez une distance de 0 cm de votre corps pour être cohérent avec la façon dont l'appareil est testé pour la conformité aux exigences d'exposition RF.

CAN RSS-216 / CNR-216

Appendix A. Notices and trademarks

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.

Lenovo may have patents or pending patent programs covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

*Lenovo (United States), Inc.
8001 Development Drive
Morrisville, NC 27560
U.S.A.
Attention: Lenovo Director of Licensing*

LENOVO PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some jurisdictions do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

Changes are made periodically to the information herein; these changes will be incorporated in new editions of the publication. To provide better service, Lenovo reserves the right to improve and/or modify the products and software programs described in the manuals included with your computer, and the content of the manual, at any time without additional notice.

The software interface and function and hardware configuration described in the manuals included with your computer might not match exactly the actual configuration of the computer that you purchase. For the configuration of the product, refer to the related contract (if any) or product packing list, or consult the distributor for the product sales. Lenovo may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

The products described in this document are not intended for use in implantation or other life support applications where malfunction may result in injury or death to persons. The information contained in this document does not affect or change Lenovo product specifications or warranties. Nothing in this document shall operate as an express or implied license or indemnity under the intellectual property rights of Lenovo or third parties. All information contained in this document was obtained in specific environments and is presented as an illustration. The result obtained in other operating environments may vary.

Lenovo may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

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.

This document is copyrighted by Lenovo and is not covered by any open source license, including any Linux agreement(s) which may accompany software included with this product. Lenovo may update this document at any time without notice.

For the latest information or any questions or comments, contact or visit the Lenovo Web site:

<https://pcsupport.lenovo.com>

Trademarks

Lenovo, Lenovo logo, IdeaCentre, and IdeaCentre logo are trademarks of Lenovo. Thunderbolt is a trademark of Intel Corporation or its subsidiaries in the U.S. and/or other countries. Microsoft, Windows, and Cortana are trademarks of the Microsoft group of companies. 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. Wi-Fi, Wi-Fi Alliance, and Miracast are registered trademarks of Wi-Fi Alliance. USB-C is a trademark of USB Implementers Forum. All other trademarks are the property of their respective owners.

Lenovo