

# User Guide



Yoga Book 9i (13", 8)

## Read this first

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

- [Generic Safety and Compliance Notices](#)
- *Safety and Warranty Guide*
- *Setup Guide*

**First Edition (April 2023)**

**© Copyright Lenovo 2023.**

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 guide . . . . .	iii
----------------------------	-----

## Chapter 1. Meet your Yoga Book 9 13IRU8 . . . . . 1

Front view . . . . .	1
Speakers . . . . .	2
Time-of-flight sensor . . . . .	2
Infrared LED . . . . .	2
Infrared camera . . . . .	2
Camera . . . . .	2
Camera light . . . . .	2
Ambient light sensor . . . . .	3
Left view . . . . .	3
Multi-purpose USB Type-C connector . . . . .	3
Charging light . . . . .	4
Novo button hole . . . . .	4
Right view . . . . .	5
Multi-purpose USB Type-C connector . . . . .	5
Camera switch . . . . .	6
Power button . . . . .	6
Power light . . . . .	6
Bottom view . . . . .	7
Antennas . . . . .	7
Speakers . . . . .	7
Specifications . . . . .	8
Statement on USB transfer rate . . . . .	9
Operating environment . . . . .	9
Specifications for peripheral devices for Yoga Book 9 13IRU8 . . . . .	10

## Chapter 2. Interact with your Yoga Book 9 13IRU8 . . . . . 11

Yoga Book 9 Bluetooth KB . . . . .	11
Keyboard switch positions . . . . .	12
Keyboard status light . . . . .	12
Pair Yoga Book 9 Bluetooth KB with Yoga Book 9 13IRU8 . . . . .	12
Charging Yoga Book 9 Bluetooth KB . . . . .	13
The Lenovo virtual keyboard . . . . .	13
Lenovo virtual keyboard customization . . . . .	14
Virtual touchpad . . . . .	14
The bottom virtual touchpad . . . . .	14
The floating virtual touchpad . . . . .	14
Hotkeys . . . . .	15
The FnLock switch . . . . .	15
Lenovo Digital Pen 3 . . . . .	16
Lenovo Pen Settings . . . . .	17

## Chapter 3. Maximize productivity with Yoga Book 9 13IRU8 . . . . . 19

Use your Yoga Book 9 13IRU8 in various modes . . . . .	19
Notebook mode . . . . .	19
Tent mode . . . . .	20
Tablet mode . . . . .	21
Fold Yoga Book 9 folio case as a stand . . . . .	23
Set how the two displays are used . . . . .	24
The User Center app . . . . .	24
Enable cross-screen display . . . . .	25
Move an app window between the two screens . . . . .	25
Enable facial recognition . . . . .	26
System operation modes . . . . .	26
Rechargeable battery pack . . . . .	27
Normal mode . . . . .	27
Rapid charge mode . . . . .	27
Conservation mode . . . . .	28
Nighttime charge optimization . . . . .	28
Recover full battery capacity . . . . .	28
The default power plan . . . . .	28
Change or customize a power plan . . . . .	29

## Chapter 4. Firmware setup utility . . . . . 31

Use Windows advanced startup to open the PC's firmware setup utility . . . . .	31
Open the PC's firmware setup utility from the Novo button menu . . . . .	31
Set passwords in UEFI/BIOS setup utility . . . . .	31
Password types . . . . .	31
Set administrator password . . . . .	32
Change or remove administrator password . . . . .	32
Set user password . . . . .	33
Enable power-on password . . . . .	33
Set password for the secondary storage device . . . . .	33
Change or remove hard disk password . . . . .	34

## Chapter 5. Help and support . . . . . 35

Frequently asked questions . . . . .	35
Why does my screen brightness change constantly . . . . .	35
Why does my computer start automatically when I open the lid . . . . .	35
I enabled some dual-screen settings in the User Center app but they do not seem to work. What are the possible causes? . . . . .	35
What is the battery's ship mode . . . . .	35

Self-help resources . . . . .	35
What is a CRU? . . . . .	36
CRUs for your product model . . . . .	37
Call Lenovo . . . . .	37
Before you contact Lenovo . . . . .	37

Lenovo Customer Support Center . . . . .	38
Purchase additional services. . . . .	38

<b>Appendix A. Notices and trademarks. . . . .</b>	<b>39</b>
--	-----------

---

## About this guide

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

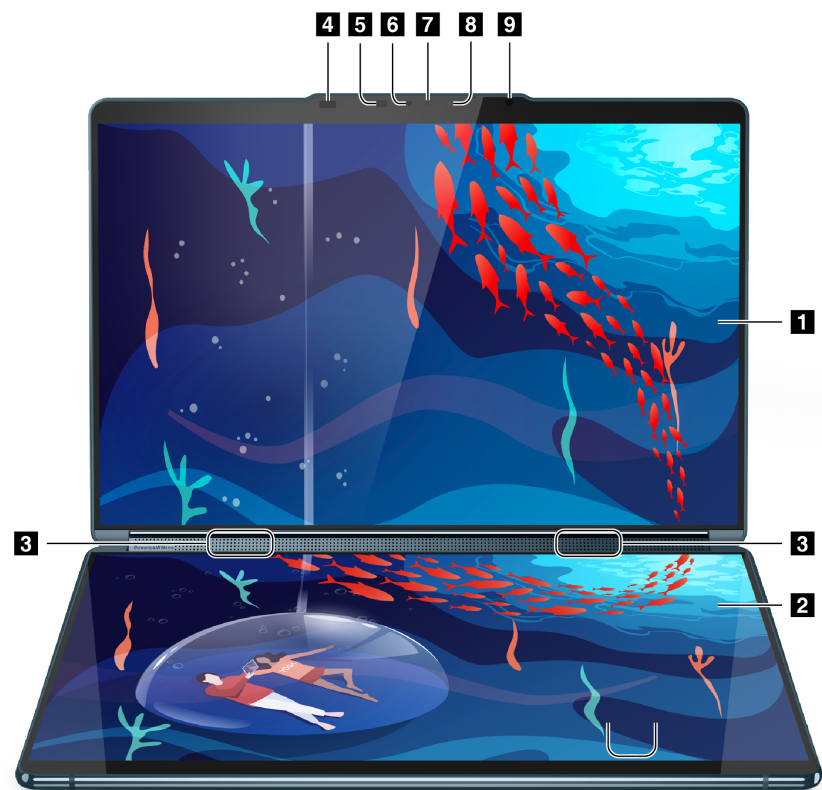
Model name	Machine type (MT)
Yoga Book 9 13IRU8	82YQ

- For further compliance information, refer to the *Generic Safety and Compliance Notices* at [https://pcsupport.lenovo.com/docs/generic\\_notices](https://pcsupport.lenovo.com/docs/generic_notices).
- This guide may contain information about accessories, features, and software that are not available on all models.
- This guide contains instructions that are based on the Windows operating system. These instructions are not applicable if you install and use other operating systems.
- Microsoft® makes periodic feature changes to the Windows® operating system through Windows Update. As a result, the operating system related instructions may become outdated. Refer to Microsoft resources for the latest information.
- The content of the guide is subject to change without notice. To obtain the latest version, go to <https://support.lenovo.com>.



# Chapter 1. Meet your Yoga Book 9 13IRU8

## Front view



No.	Description
1	Top screen
2	Bottom screen
3	Speakers
4	ToF sensor
5	IR LED
6	IR camera
7	Camera
8	Camera light
9	Ambient light sensor

## Speakers

The speakers are the PC's built-in sound output devices.

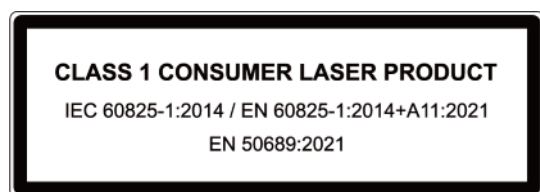
## Time-of-flight sensor

The time-of-flight sensor (also referred to as a ToF sensor) emits an infrared laser and uses the reflected infrared energy to measure the distance and depth of objects in front of it. The data collected by the sensor can be used to detect human presence or recognize gestures.

**Note:** The infrared laser emitted by the ToF sensor is invisible to the human eye.

## Laser safety information

This device is classified as a Class 1 consumer laser product per *IEC 60825-1:2014*, *EN 60825-1:2014+A11:2021*, and *EN 50689:2021*. This device complies with FDA performance standards for laser products except for conformance with *IEC 60825-1 Ed. 3*, as described in *Laser Notice No. 56*, dated May 8, 2019.



### CAUTION:

**This device contains a laser that could be damaged during repair or disassembly, which could result in hazardous exposure to infrared laser emissions. There are no user serviceable parts within the device. Do not attempt to disassemble or service the device.**

## Infrared LED

The infrared LED generates and emits near-infrared waves that are received and used by a camera (or a dedicated infrared camera) for facial recognition.

## Infrared camera

The infrared camera receives near-infrared waves emitted by an infrared LED and reflected by a human face. It is used for facial recognition.

## Camera

The built-in camera captures visible light and converts it to digital signals. It is used for video recordings and video conferencing.

## Camera light

The camera light indicates whether the camera is activated.

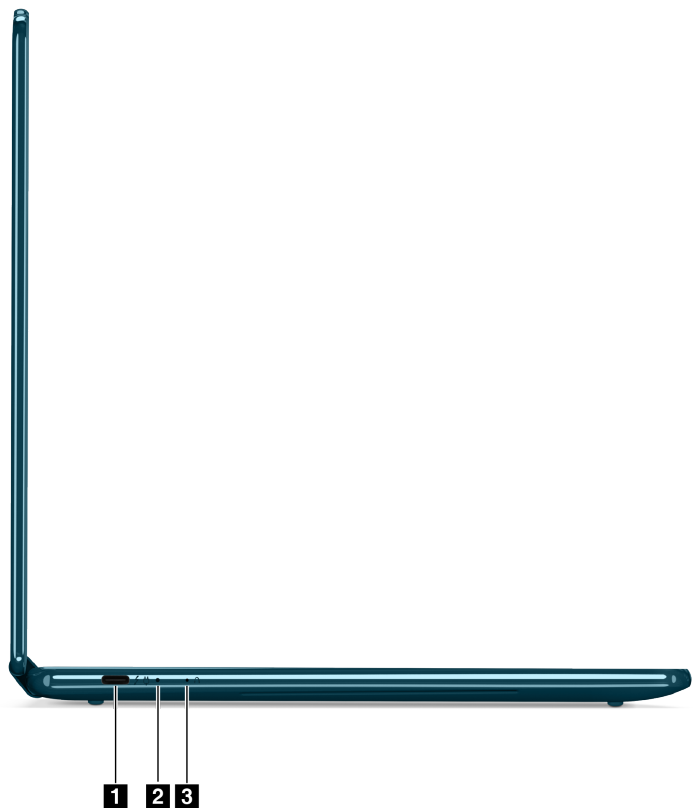
Table 1. Camera light statuses and descriptions

Camera light status	Description
On	The camera is activated.
Off	The camera is not activated.

# Ambient light sensor

The ambient light sensor detects and measures the intensity of light in the user's environment. The data collected by this sensor can be used to enable adaptive brightness for the screen backlight.

## Left view



No.	Description
1	Multi-purpose USB Type-C connector
2	Battery charging light
3	Novo button hole

## Multi-purpose USB Type-C connector

This USB Type-C® connector is the PC's power input connector. Use the included power adapter and this connector to supply power to the PC.

When this connector is not used by the included power adapter, it can also be used to connect:

- Storage or peripheral devices that follow the universal serial bus (USB) specification for data transfer and device interconnection

- Display devices

**Note:** When connecting display devices, you need to use appropriate cables and adapters (if needed) according to the connection capabilities of the display device.

- Thunderbolt™-enabled docks or devices

## Charging light

The charging light indicates whether the PC is plugged into an electrical outlet. When the PC is plugged into an electrical outlet, the color of the light indicates whether the battery is fully charged (or will shortly be fully charged).

Table 2. Charging light statuses and descriptions

Light status	Plugged in?	Battery charge level
Off	No	/
On, amber	Yes	1%–90%
On, white	Yes	91%–100%

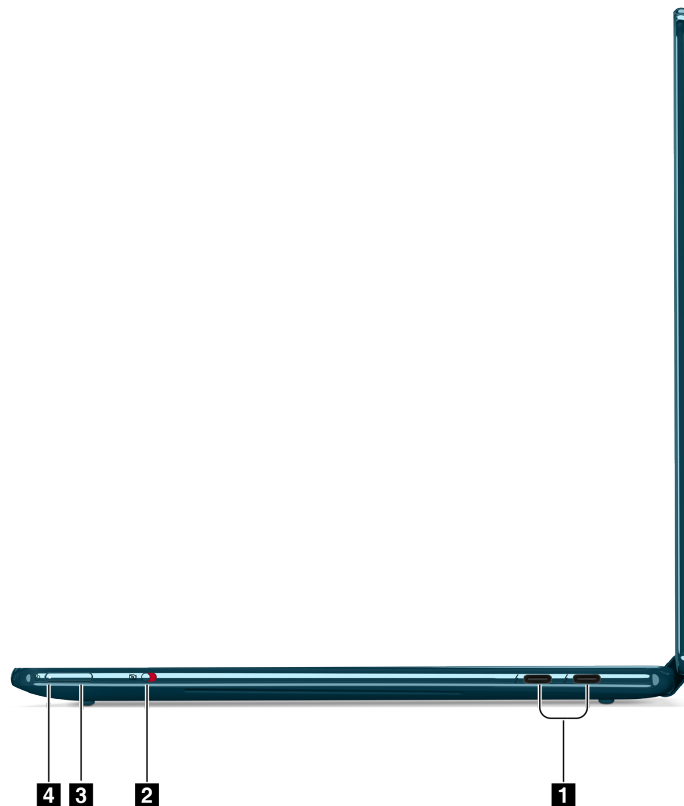
## Novo button hole

When the PC is powered off, you can press the Novo button to display the Novo button menu. From the menu, you can then choose to:

- Open the firmware setup utility
- Display the boot device selection menu
- Display the Windows advanced startup options page

**Note:** The Novo button is rarely used during normal PC operations. To prevent users from accidentally pressing it, the Novo button is placed in a recessed hole. You can use a straightened paper clip to press this button.

## Right view



No.	Description
1	Multi-purpose USB Type-C connector
2	Camera switch
3	Power button
4	Power light

### Multi-purpose USB Type-C connector

This USB Type-C® connector is the PC's power input connector. Use the included power adapter and this connector to supply power to the PC.

When this connector is not used by the included power adapter, it can also be used to connect:

- Storage or peripheral devices that follow the universal serial bus (USB) specification for data transfer and device interconnection
- Display devices

**Note:** When connecting display devices, you need to use appropriate cables and adapters (if needed) according to the connection capabilities of the display device.

- Thunderbolt™-enabled docks or devices

## Camera switch

This toggle switch is used to enable or disable the built-in camera.

**Note:** This switch is designed for privacy protection. If you don't need to use the camera, slide the switch to the off position to prevent any apps from using the camera.

## Power button

Press the power button to turn on your PC.

**Note:** By default, on a Windows PC, pressing the power button when the PC is turned on will put the PC into sleep mode.

## Power light

The power light indicates the current power state of the PC: whether it is powered on, powered off, in sleep mode, or in hibernation mode.

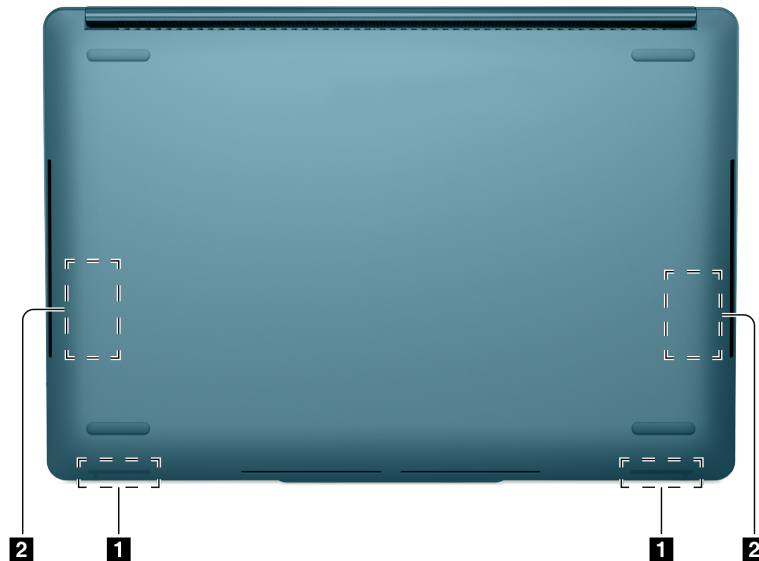
When the PC is powered on, this light can also indicate low battery by blinking rapidly.

*Table 3. Power light status and description*

Light status	Power state	Battery charge level
White (solid on)	Powered on	21%–100%
White (blinking rapidly)	Powered on	1%–20%
White (blinking slowly)	In sleep mode	/
Off	Powered off or in hibernation mode	/

---

## Bottom view



No.	Description
1	Wi-Fi and Bluetooth antennas
2	Speakers

### Antennas

The antennas transmit and receive radio waves to allow data to be transferred between your PC and a Wi-Fi network device or a Bluetooth device.

**Note:** The antennas are hidden inside the PC.

### Speakers

The speakers are the PC's built-in sound output devices.

---

## Specifications

### Dimensions

Width	358.1 mm
Depth	263.5 mm
Thickness	20 mm

### ac power adapter

Input	100 V ac–240 V ac, 50 Hz–60 Hz
Maximum output	20 V, 3.25 A

### Rechargeable battery pack

Capacity	80 Wh
Cell type	Li-Polymer

### Memory

Type	LPDDR5X
Installation	on-board

### Mass storage

Type	SSD
Slot	M.2 (2242)
Interface	PCIe Gen4

### Display

Quantity	2
Type	OLED
Size	13.3 inch
Resolution	2880 × 1800
Refresh rate	60 Hz
Color depth	8 bit

## Connectors

USB Type-C	<ul style="list-style-type: none"><li>• Quantity: 3</li><li>• Maximum power output: 5 V, 3 A</li><li>• Maximum power input: 20 V, 3.25 A</li><li>• Protocol:<ul style="list-style-type: none"><li>– USB 2.0 480 Mbps</li><li>– SuperSpeed USB 5 Gbps</li><li>– SuperSpeed USB 10 Gbps</li><li>– DisplayPort 1.4</li><li>– Thunderbolt 4 41.25 Gbps</li></ul></li></ul>
------------	--

**Note:** Data rates and performance ratings are dependent on connected devices and cables if they are used. USB Type-C connectors that are DisplayPort 1.4 compliant through DisplayPort alternate mode provide maximum output resolution of 5120 x 3200, at 60 Hz frame rate and color depth of 24 bpp (bits per pixel). The actual maximum output resolution is dependent on the connected display device and the cable being used.

## Networking

Wi-Fi	Wi-Fi6E
Bluetooth	Bluetooth 5.2

## Sensors

Sensor	Quantity
Accelerometer	2
ToF	1
Ambient light sensor	1
Hall sensor	4

## 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

## Operating environment

### Maximum altitude (without pressurization)

3048 m (10 000 ft)

## Temperature

- At altitudes up to 2438 m (8000 ft)
  - Operating: 5°C to 35°C (41°F to 95°F)
  - Storage: 5°C to 43°C (41°F to 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, its temperature must be no lower than 10°C (50°F).

## Relative humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage: 5% to 95% at wet-bulb temperature 27°C (81°F)

---

## Specifications for peripheral devices for Yoga Book 9 13IRU8

### Bluetooth keyboard

Model name	Yoga Book 9 Bluetooth KB
Dimensions	295.3 mm × 113 mm × 7.8 mm
Standard	Bluetooth 5.2
Operating environment	<ul style="list-style-type: none"><li>• Temperature: 0°C–40°C</li><li>• Humidity: 0%–90%</li></ul>
Storage environment	Temperature: -20°C–60°C
Battery type	Lithium-ion
Voltage	5 V
Capacity	850 mAh

### Digital pen

Model name	Lenovo Digital Pen 3
Type	Active electrostatic stylus
Diameter	9.5 mm
Length	140 mm
Battery type	AAAA dry cell
Voltage	1.5 A
Capacity	650 mAh
Operating environment	<ul style="list-style-type: none"><li>• Temperature: 5°C–40°C</li><li>• Humidity: 30%–80%</li></ul>
Storage environment (without battery)	<ul style="list-style-type: none"><li>• Temperature: -10°C–60°C</li><li>• Humidity: 30%–80%</li></ul>

## Chapter 2. Interact with your Yoga Book 9 13IRU8

Both displays of the Yoga Book 9 13IRU8 are touch enabled. You can touch the screens to interact with the operating system and your installed apps. The Windows operating system also supports multi-touch gestures.

Yoga Book 9 13IRU8 includes neither a built-in keyboard nor a built-in touchpad. For text input, you can use the Bluetooth keyboard that comes with your Yoga Book 9 13IRU8. Alternatively, you can activate the Lenovo virtual keyboard on the bottom screen. If you want a pointer to precisely select screen items, you can activate a virtual touchpad on the bottom screen and use it as your pointing device.

A digital pen is also included for drawing and note-taking.

### Yoga Book 9 Bluetooth KB

Yoga Book 9 Bluetooth KB is a Bluetooth keyboard that is specifically designed for your Yoga Book 9 13IRU8. You can pair the keyboard with Yoga Book 9 13IRU8 and then use it for typing characters. The keyboard includes hotkeys that provide quick access to settings and operations that you use frequently.



Figure 1. Yoga Book 9 Bluetooth KB—Right view





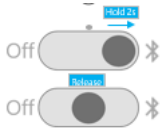
Figure 2. Yoga Book 9 Bluetooth KB—Top view

No.	Description
1	Power/connection switch
2	Charging/connection light
3	Charging connector (USB Type-C)
4	FnLock switch

No.	Description
5	Dual-function keys
6	Fn key

## Keyboard switch positions

The keyboard switch can be placed in one of three positions.

Switch position	Description
	The keyboard is turned off.
	The keyboard is in free connection mode. It will be re-connected if placed near a previously paired Bluetooth-enabled device.
	The keyboard is made discoverable by other Bluetooth-enabled devices.

## Keyboard status light

The status light on the right side of Yoga Book 9 Bluetooth KB indicates the power and connection status of the keyboard.

Light status	Description
Off	<ul style="list-style-type: none"> <li>[Switch in off position] The keyboard is powered off.</li> <li>[Switch in free connection position] The keyboard is connected with another Bluetooth-enabled device.</li> </ul>
On (amber)	The keyboard is being charged. (charge level under 90%)
Rapid blinking (amber)	The battery of the keyboard is low.
Blinking (white) 4 times and then turned off	The keyboard is trying to connect with a paired Bluetooth-enabled device.
Blinking (white) 5 times in quick succession	The keyboard is connected with a paired Bluetooth-enabled device.

## Pair Yoga Book 9 Bluetooth KB with Yoga Book 9 13IRU8

Before you begin using the Yoga Book 9 Bluetooth KB, make sure it is paired with the Yoga Book 9 13IRU8.

- Step 1. Hold the switch of the Bluetooth keyboard in the pairing position for 2 seconds and then release the switch.
- Step 2. Enable Bluetooth on Yoga Book 9 13IRU8.
- Step 3. Select **Settings** → **Bluetooth & devices** → **Add device** → **Bluetooth**.
- Step 4. On the found devices list, click a device that is labeled “YB9 KB.”

The Yoga Book 9 Bluetooth KB should now be paired with your PC and is ready for use. The battery level of the Bluetooth keyboard is displayed on the PC.

## Charging Yoga Book 9 Bluetooth KB

The Yoga Book 9 Bluetooth KB is powered by a built-in lithium-ion battery. When connected to the PC, you can check the battery level of the keyboard. Recharge the keyboard when it is running low on battery.

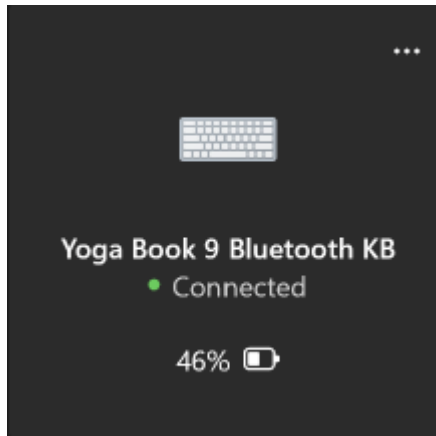


Figure 3. The Windows Settings app shows the battery level for connected Bluetooth devices

**Note:** The light on the right side of the Yoga Book 9 Bluetooth KB blinks amber if the keyboard is in a low-battery state.

The Yoga Book 9 Bluetooth KB includes a USB Type-C charging connector. Use the battery charger that came with your Yoga Book 9 13IRU8 to recharge the keyboard.

---

## The Lenovo virtual keyboard

When activated, the Lenovo virtual keyboard is displayed on the bottom screen of the Yoga Book 9 13IRU8. It is a QWERTY-based, six-row, standard Lenovo keyboard that also provides function keys (F1–F12), hotkeys (shortcut keys), and Fn-based key combinations.

There are three options to activate the Lenovo virtual keyboard. Each option can be turned on or off in the User Center app.


Table 4. Options for activating the Lenovo virtual keyboard

Option	Status	How to activate the Lenovo virtual keyboard?
Clicking within a text input area	Turned on	Click a text input area.
Icon in system tray	Turned on	Click the notification area of the Windows taskbar and then click the virtual keyboard icon.
Using 8 fingers	Turned on	Tap the bottom screen with eight fingers.

**Note:** The Lenovo virtual keyboard is not available when you use the Yoga Book 9 13IRU8 in tent or tablet mode.

When activated, the virtual keyboard is displayed on the upper or lower part of the bottom screen. To switch the position of the virtual keyboard, slide 8 fingers upwards or downwards on the bottom screen.

## Lenovo virtual keyboard customization

When the Lenovo virtual keyboard is activated, you can press the settings key (  ) to customize the following keyboard settings:

- Change the keyboard transparency
- Turn the key-pressing sound on or off
- Turn the key-pressing vibration on or off

---

## Virtual touchpad

Most notebook PCs include a built-in touchpad for interacting with the PC's graphical user interface. You manipulate objects and text on the screen by sliding and tapping your finger on the touchpad. With Yoga Book 9 13IRU8, you can activate and use a virtual touchpad to perform such tasks.

**Note:** The Lenovo virtual touch pad is not available when you use Yoga Book 9 13IRU8 in tent or tablet mode.

## The bottom virtual touchpad

When you put Yoga Book 9 Bluetooth KB or activate the Lenovo virtual keyboard on the upper part of the bottom screen, a virtual touchpad with two click buttons is displayed below the keyboard. You can slide your finger and tap the click buttons as you would on a physical touchpad.



**Note:** If the Lenovo virtual keyboard is activated on the lower part of the bottom screen, you can press the F10 hotkey to move the keyboard upward to reveal the virtual touchpad.

## The floating virtual touchpad

You can also activate a floating virtual touchpad on the bottom screen of Yoga Book 9 13IRU8. There are three options to activate the floating virtual touchpad.

- Press the F10 hotkey on Yoga Book 9 Bluetooth KB
- Tap the bottom screen of Yoga Book 9 13IRU8 with three fingers
- Click the virtual touchpad icon on Windows system tray

**Note:**

The last two options need to be enabled in the User Center app.

















You can resize the floating touchpad by dragging the triangle in the upper left corner or re-position it by dragging the top bar. To close the floating touchpad, click the × button.

## Hotkeys

Both Yoga Book 9 Bluetooth KB and the Lenovo virtual keyboard provide hotkeys in the top row of the keyboard. These shortcut keys provide you with quick access to frequently used settings, apps, and tasks.

Table 5. Hotkey icons and functions

Hotkey icon	Function description
	Mutes/Unmutes sound.
	Decreases volume.
	Increases volume.
	Enables/Disables the microphone.
	Increases screen brightness.
	Decreases screen brightness.
	Selects and sets up display devices.
	Locks the screen. (Windows operating systems)
	Opens the Settings app. (Windows operating systems)
	Opens the Snipping tool. (Windows operating systems)
	Displays the Lenovo Smart Key quick launch panel.
	Opens the virtual touchpad.
	Opens/closes the widget bar.
	Opens the User Center app.

**Note:** Hotkey functions may change if the associated app or the Windows operating system is updated.

## The FnLock switch

Hotkeys usually share keys with function keys (F1–F12) and other top row keys. Each of these dual-function keys is printed with an icon denoting the hotkey function and a character string denoting the number of the function key.

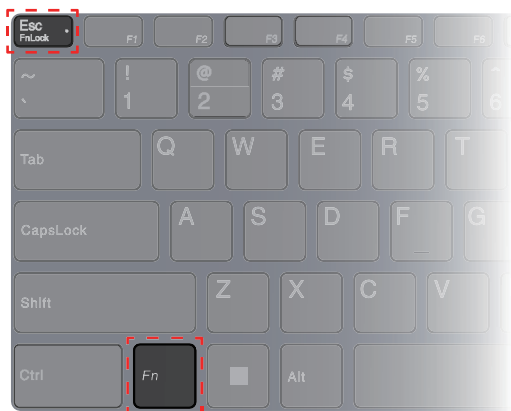


Figure 4. Locations of the FnLock key and the Fn key

- A: an icon or character denoting the primary function
- B: an icon or character denoting the secondary function

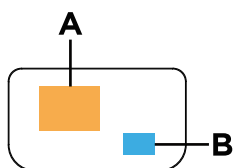


Figure 5. The printed content of a dual-function key

The FnLock is an electronic switch that can reverse the primary and secondary function of the top row dual-function keys. Press Fn + Esc to turn this switch on and off.

**Note:** On the Bluetooth keyboard, a light on the Esc key indicates the status of the switch. On the Lenovo virtual keyboard, the icons or characters of the dual-function keys turn white or grey to indicate which function becomes primary.

## Lenovo Digital Pen 3

Lenovo Digital Pen 3 is provided with your Yoga Book 9 13IRU8. You can use this digital pen to take notes or draw pictures.

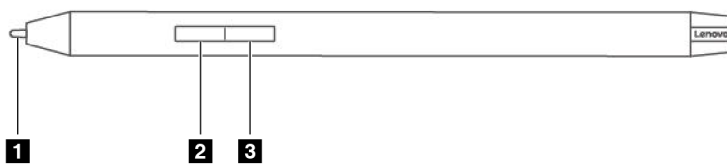


Figure 6. Overview of Lenovo Digital Pen 3

No.	Description
1	Pen tip
2	Bottom button
3	Top button

## Lenovo Pen Settings

Lenovo Pen Settings is a pre-installed app for setting up Lenovo digital pens. This app allows you to perform the following functions:

- Reassign pen button functions
- Adjust pen sensitivity
- Check the pen's battery level

To open the Lenovo Pen Settings, type the app name in the Windows search box and select the matched result.



---

## Chapter 3. Maximize productivity with Yoga Book 9 13IRU8

Your Yoga Book 9 13IRU8 is an innovative and versatile PC product. It includes two displays that can be set to work independently or together. It also contains a built-in gyroscope. When you flip or rotate your Yoga Book 9 13IRU8, the screen content is oriented accordingly (landscape or portrait).

The Yoga Book 9 folio case can be folded to create a stand. There are two different ways to do so. You can put your Yoga Book 9 13IRU8 on the stand and use the Yoga Book 9 Bluetooth KB for writing and programming tasks.

The hinges that connect the two displays of the Yoga Book 9 13IRU8 can rotate 360°. If you need to present an idea to a colleague, you can rotate the hinges and use the PC in tent mode. It can also change into a tablet when needed.

---

### Use your Yoga Book 9 13IRU8 in various modes

By taking advantage of the 360° rotation hinges, the Yoga Book 9 13IRU8 can be used in the following modes.

- Notebook mode
- Tent mode
- Tablet mode

#### Notebook mode

You can use your Yoga Book 9 13IRU8 like any conventional notebook PC.

You can put Yoga Book 9 Bluetooth KB on top of the bottom screen of Yoga Book 9 13IRU8. When placed on the upper part of the screen, a virtual touch pad is displayed below the keyboard. When placed on the lower part of the screen, a widget bar is displayed above the keyboard.



Figure 7. Yoga Book 9 Bluetooth KB used on the upper part of the bottom screen

## Tent mode

You can rotate the hinges that connect the two displays beyond 180° and place it on a desktop. When used in this mode, your Yoga Book 9 13IRU8 looks like a tent.

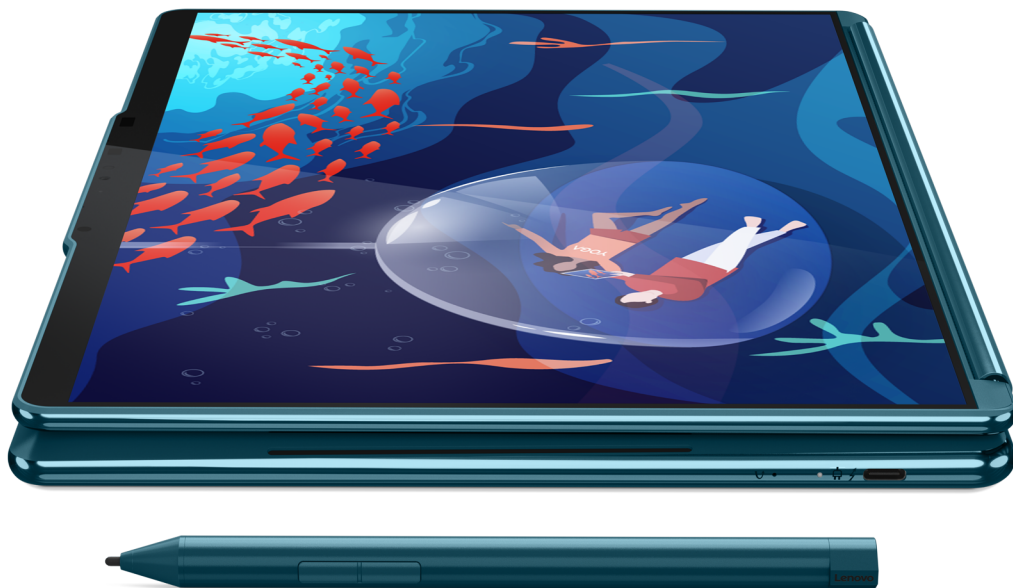
You may use Yoga Book 9 13IRU8 in tent mode to present slides to a coworker sitting opposite you.



*Figure 8. Yoga Book 9 13IRU8 used in tent mode for presentation*

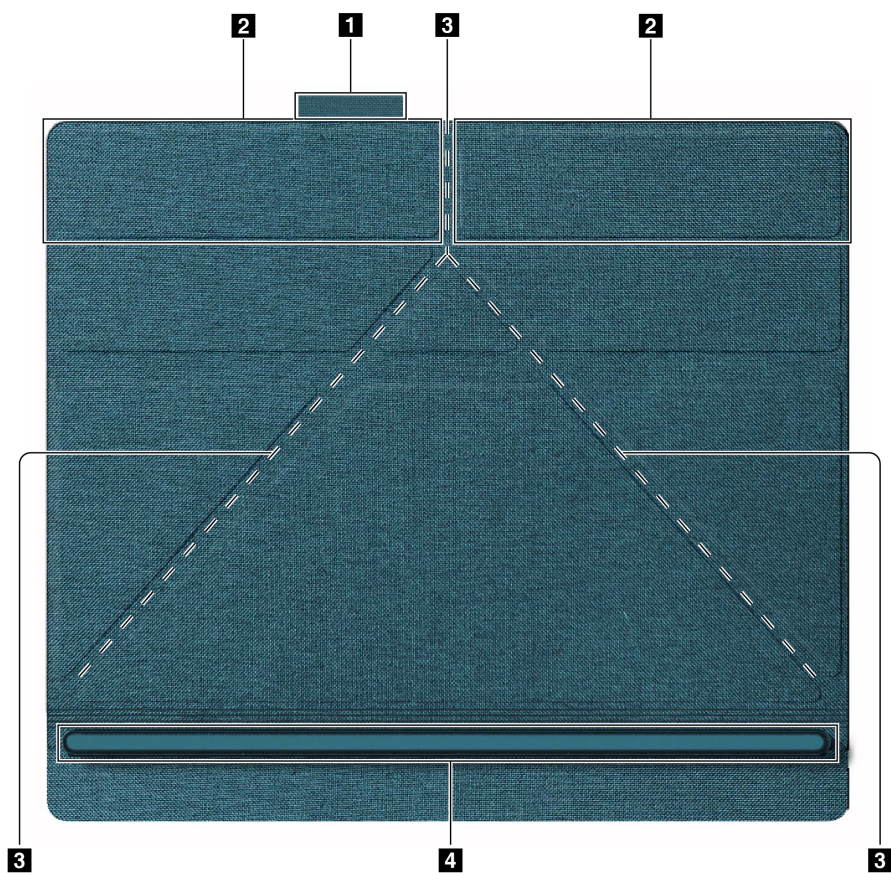
## Tablet mode

You can rotate the hinges that connect the two displays 360° and use Yoga Book 9 13IRU8 as a tablet PC. When you set your Yoga Book 9 13IRU8 to tablet mode, Windows display settings change automatically to allow content to be displayed only on the top screen.



*Figure 9. Yoga Book 9 13IRU8 used as a tablet PC*

Fold Yoga Book 9 folio case as a stand



Number	Description
1	Pen loop
2	Magnetized area
3	Folding lines to create a stand
4	Support bar

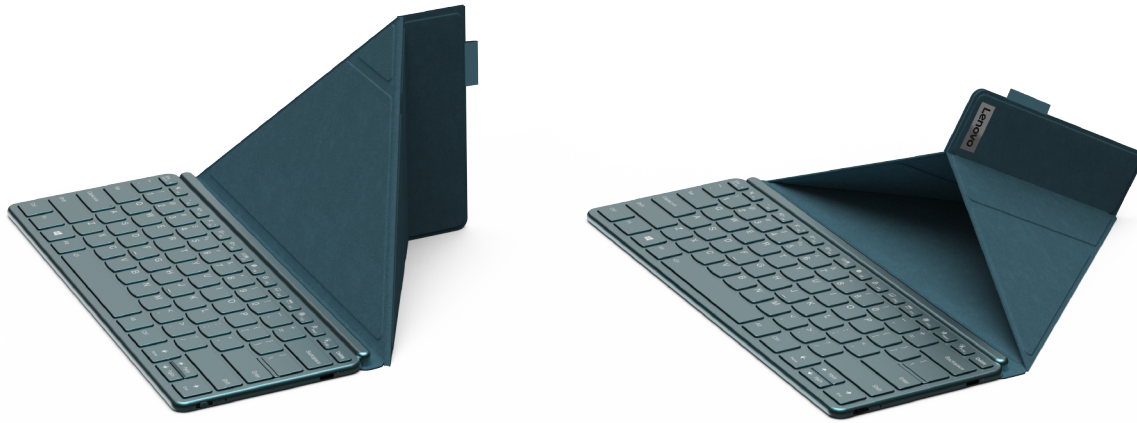


Figure 10. The two folding methods

Yoga Book 9 folio case can be folded in one of two ways to be used as a stand for Yoga Book 9 13IRU8. When setting Yoga Book 9 13IRU8 on the stand, make sure its bottom edge is placed completely into the groove of the support bar.

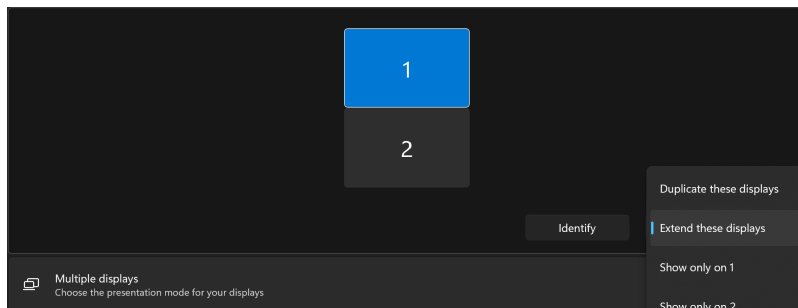
---

## Set how the two displays are used

Yoga Book 9 13IRU8 includes two displays. In the Windows Settings app, you can change how the two displays are used.

Step 1. Select **Settings → Display**.

Step 2. Use the drop-down list to change the setting.



**Note:** The default setting “Extend these displays” is suitable for most usage scenarios.

---

## The User Center app

User Center is an app developed specifically for Yoga Book 9 13IRU8. In this app, you can

- Enable options to display the window transfer assistant
- Enable options to display the widget bar
- Select wallpapers optimized for displaying across two screens

- Set up screen brightness separately for the two screens
- Set up how the virtual keyboard is activated
- Set up how the virtual touchpad is activated

**Note:** Periodic improvements to the User Center app may be available through online updates. When an update is downloaded, the app will display a notice and prompt you to install it. Features may be added or modified after updates are installed.

To open the app, search the app name in Windows search box and select the matched result. Alternatively, you can press the User Center hotkey (F12) on Yoga Book 9 Bluetooth KB or on the Lenovo virtual keyboard.

## Enable cross-screen display

You can enable cross-screen display for viewing web pages and reading documents. When enabled, your viewing space increases with content displayed starting from the top screen and continuing into the bottom screen.





- Step 1. Open the User Center app and select **Dual-screen Settings**.
- Step 2. Tap the toggle button for **Cross-screen Browsing**.
- Step 3. Open a web page or a document window.
- Step 4. Tap on the top or bottom screen with 5 fingers.

The Web page or document window should now be displayed across the top and bottom screens. To exit cross-screen display, tap the top or bottom screen again with five fingers.

**Note:** Cross-screen display is not available when you use Yoga Book 9 13IRU8 in portrait mode.

## Move an app window between the two screens

When the two displays of the Yoga Book 9 13IRU8 are set in extension mode (the default setting), you can quickly move an app window to another screen to make room for the work that you have at hand.

- Step 1. Click and drag the title bar of an app until one of the window transfer icons (, , , or ) appears.

**Note:** If the window transfer icon does not appear, open the User Center app, select **Dual-screen Settings → Window Management** and check the options for dragging a window with a mouse and finger.

- Step 2. Drag the app window onto the icon and release it.

The app window will be sent instantly to the other screen and displayed full screen.

**Note:** If you hover the app window on the icon for a few seconds, the screen layout widget appears. You can then choose a zone in a screen layout so that the app window is sent to the other screen and snaps to that particular zone.

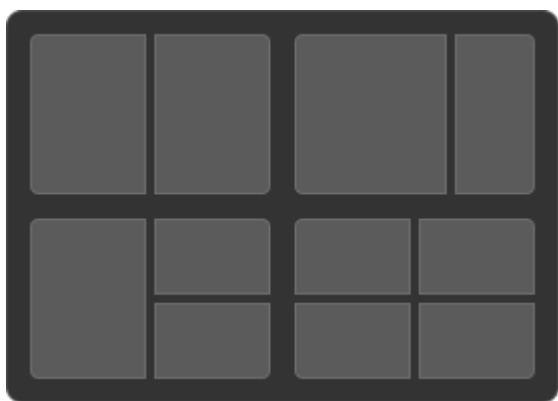


Figure 11. Screen layout widget

---

## Enable facial recognition

Your Yoga Book 9 13IRU8 includes an infrared camera for facial recognition. When enabled, you can sign into Windows and Microsoft services just by looking at the camera.

Step 1. Select **Settings → Account → Sign-in options → Facial recognition → Set up**.

**Note:** If you're using a local account to sign into Windows, make sure your account is password protected.

Step 2. Follow the on-screen instructions to enroll your face.

Step 3. Set up a PIN when prompted.

The PIN is unique to your device and can be used when facial recognition fails.

---

## System operation modes

Lenovo has preset several modes in which your computer can operate. The maximum attainable performance, power consumption, and speed limit for the heat sink fan vary between the operation modes. Consider the following conditions when you want to switch operation modes.

- The environment where you use your computer, and
- The tasks running on your computer

You can switch the operation mode in the pre-installed app Lenovo Vantage, Lenovo Smart Engine, or Lenovo PC Manager. As a shortcut, you can also use the key combination Fn + Q. Three modes are usually available for most Lenovo computers. The following table lists the operation modes and the recommended conditions for each mode.

**Note:** The operation modes listed in the table are descriptive and may not be the same as those displayed by the app.

Table 6. Operation modes and their recommended usage conditions

Operation mode	Recommended conditions
High Performance	<ul style="list-style-type: none"> <li>• Your computer is plugged into an electrical outlet.</li> <li>• You want the best performance, and</li> <li>• You don't care if the fan makes a little noise.</li> </ul>
Auto (Balance)	You plan to frequently switch between different computer tasks over a period time.
Power Saving (Quiet)	<ul style="list-style-type: none"> <li>• Your computer is operating on battery power, or</li> <li>• You want the computer to be as quiet as possible.</li> </ul>

**Note:** In Auto (Balanced) mode, the computer dynamically switches between High Performance mode and Power Saving (Quiet) mode depending on the tasks running on the computer.

## Rechargeable battery pack

Your computer includes a built-in, rechargeable battery pack that makes mobile computing a reality. When the computer is plugged into an electrical outlet, the battery charges. If you use the computer when you don't have access to an electrical outlet, the battery discharges to supply electricity that the computer system requires for operation.

You can charge the battery any time you want. The battery packs of Lenovo computers support multiple charging modes that are suitable for different power usage habits. You can switch the battery's active charging mode in Lenovo Vantage, Lenovo PC Manager, or Lenovo Smart Engine.

Battery charging is also affected by its temperature. The recommended temperature range for charging the battery is between 10°C (50°F) and 35°C (95°F).

### Note:

You can check the battery temperature in Lenovo Vantage.

To maximize the life of the battery, once the battery is fully charged, it must discharge to 94% or lower before it will be allowed to recharge again.

## Normal mode

Normal mode is the most basic charging mode. In normal mode, it typically takes 2 to 4 hours for the battery to charge from 0% to 100%.

## Rapid charge mode

If you want the battery to be charged faster than in normal mode, switch the battery charging to rapid charge mode. The following table lists the estimated time needed for batteries in rapid charge mode to be charged to 80% and 100% respectively.

Table 7. Estimated charge time for batteries in rapid charge mode

Mode	Time needed to charge from 0% to 80%	Time needed to charge from 0% to 100%
Rapid charge	Less than 1 hour	Less than 2 hours

**Note:** The estimated charge time assumes that the battery is charged when the PC is in sleep, hibernation, or powered-off state.

## Conservation mode

If your computer is constantly plugged into an electrical outlet, consider switching the battery charging to conservation mode. In conservation mode, the battery will not be fully charged. Instead, the battery's charge will be kept within 75%–80%. This is beneficial to the long-term health of the battery.

**Note:** If you want the battery to be fully charged before bringing the computer to work, disable conservation mode by switching the battery charging to normal or rapid charge mode.

## Nighttime charge optimization

Some people follow a regular pattern when using their computers. They finish their workday with the computer at a low battery charge level. They plug in their computers at night and need the battery to be fully charged the next morning so they can unplug the computer and bring it to work. These activities happen at approximately the same time each day. If this sounds like you, consider enabling nighttime charge optimization for the battery.

Nighttime charge optimization affects battery charging during the night hours, the time when you're usually asleep. When it is enabled, the computer regularly adapts its charging behavior based on observation of when you plug in the computer at night and unplug it in the morning. During the nighttime, the battery is charged to a particular range and is kept within that range for an extended period, before being further charged to 100%. Nighttime charge optimization ensures safe charging during the night and is beneficial to the long-term health of the battery.

**Note:** With nighttime charge optimization enabled, if you break your routine one day by unplugging the computer much earlier than usual in the morning, you may find that the battery is not fully charged.

If the battery pack of your computer supports nighttime charge optimization, it can be enabled in Lenovo Vantage, Lenovo PC Manager, or Lenovo Smart Engine.

## Recover full battery capacity

If your computer is constantly plugged in to an electrical outlet and the battery rarely discharges, the battery may not be charged to its full capacity even if the battery meter reports 100% charge. You can recover the battery's full charging potential simply by discharging and re-charging the battery.

Step 1. Unplug the computer and use it until the battery charge drops below 20%.

Step 2. Plug in the computer and charge the battery to 100%.

---

## The default power plan

A power plan is a collection of power-saving settings made available by an operating system. With a power plan, you can set idle time-outs for different hardware components to enter a low-power state. The default power plan and some of its idle time-out settings are listed below for computer models pre-installed with Windows.

The listed settings are active when the computer is connected to an electrical outlet. If your computer include a built-in battery pack, a different collection of time-out settings is set to take effect when the computer is operating on battery power.

Table 8. Default power-saving settings

Power plan	Balanced
Turn off the display	After 5 minutes
Put the computer to sleep	After 5 minutes

**Note:** To wake the computer from the sleep state, press the power button or any key on the Bluetooth keyboard.

## Change or customize a power plan

You can customize the power-saving settings for the default power plan according to your usage of the PC.

Step 1. Type power plan in the Windows search box and select **Choose a power plan** in the matched results.

Step 2. Select **Change plan settings** and change the time-out settings for turning off the display and putting the computer to sleep.

**Note:** If you want to change other time-out settings, select **Change advanced power settings**.

Step 3. After changes are made, select **Save changes**.



---

## Chapter 4. Firmware setup utility

Your PC's firmware is a piece of software that is stored on the PC's flash ROM. Firmware plays a key role in the operation of the PC. When you turn on the PC, the firmware checks and initiates the PC's hardware devices. It also checks the boot device for completeness and security, before executing the code to start up the operating system.

A Lenovo PC usually provides a setup utility for you to change some firmware settings. You can use Windows advanced startup to restart your PC and open the firmware setup utility. Alternatively, you can access the setup utility from the Novo button menu.

Many firmware settings are also available in Lenovo developed apps, such as Lenovo PC Manager and Lenovo Vantage. For daily use of your PC, you should use the firmware setup utility very rarely.

---

### Use Windows advanced startup to open the PC's firmware setup utility

From the Windows operating system, you can use the advanced startup to restart your PC and open the firmware setup utility.

- Step 1. Select **Settings** → **System** → **Recovery**.
- Step 2. Under **Advanced startup**, select **Restart now**.  
Your PC will restart.
- Step 3. Select **Troubleshoot** on the **Choose an option** page.
- Step 4. Select **Advanced options** on the **Troubleshoot** page.
- Step 5. Select **UEFI firmware settings** on the **Advanced options** page.
- Step 6. Click **Restart**.

Your PC will restart to open the firmware setup utility.

---

### Open the PC's firmware setup utility from the Novo button menu

For Lenovo PCs with a Novo button, you can open the PC's firmware setup utility from the Novo button menu.

- Step 1. Shut down your PC.
- Step 2. Press the Novo button.
- Step 3. From the Novo button menu, select **BIOS setup**.

---

### Set passwords in UEFI/BIOS setup utility

This section introduces the types of passwords that you can set in the UEFI (Unified Extensible Firmware Interface) or BIOS (Basic Input/Output System) setup utility.

#### Password types

You can set various types of passwords in the UEFI/BIOS setup utility.

Password type	Pre-requisite	Usage
Administrator password	No	You must enter it to start the setup utility.
User password	The administrator password must be set.	You can use the user password to start the setup utility.
Master hard disk password	No	You must enter it to start the operating system.
User hard disk password	The master hard disk password must be set.	You can use the user hard disk password to start the operating system.

#### Notes:

- All passwords set in the setup utility consist of alphanumeric characters only.
- If you start the setup utility using the user password, you can only change a few settings.

## Set administrator password

You set the administrator password to prevent unauthorized access to the UEFI/BIOS setup utility.

**Attention:** If you forget the administrator password, a Lenovo authorized service personnel cannot reset your password. You must take your computer to a Lenovo authorized service personnel to have the system board replaced. Proof of purchase is required and a fee will be charged for parts and service.

- Step 1. Open the UEFI/BIOS setup utility.
- Step 2. Select **Security → Set Administrator Password** and press Enter.
- Step 3. Enter a password string that contains only letters and numbers and then press Enter
- Step 4. Enter the password again and press Enter.
- Step 5. Select **Exit → Exit Saving Changes**.

Next time you start the computer, you must enter the administrator password to open the setup utility. If **Power on Password** is enabled, you must enter the administrator password or the user password to start the computer.

## Change or remove administrator password

Only the administrator can change or remove the administrator password.

- Step 1. Open the UEFI/BIOS setup utility using the administrator password.
- Step 2. Select **Security → Set Administrator Password** and press Enter.
- Step 3. Enter the current password.
- Step 4. In the **Enter New Password** text box, enter the new password.
- Step 5. In the **Confirm New Password** text box, enter the new password again.

**Note:** If you want to remove the password, press Enter in both text boxes without entering any character.

- Step 6. Select **Exit → Exit Saving Changes**.

If you remove the administrator password, the user password is also removed.

## Set user password

You must set the administrator password before you can set the user password.

The administrator of the setup utility might need to set a user password for use by others.

- Step 1. Open the UEFI/BIOS setup utility using the administrator password.
- Step 2. Select **Security → Set User Password** and press Enter.
- Step 3. Enter a password string that contains only letters and numbers and then press Enter.  
The user password must be different from the administrator password.
- Step 4. Enter the password again and press Enter.
- Step 5. Select **Exit → Exit Saving Changes**.

## Enable power-on password

If the administrator password has been set, you can enable power-on password to enforce greater security.

- Step 1. Open the UEFI/BIOS setup utility.
- Step 2. Select **Security → Power on Password** and press Enter.  
  
**Note:** The administrator password must be set in advance.
- Step 3. Change the setting to **Enabled**.
- Step 4. Select **Exit → Exit Saving Changes**.

If power-on password is enabled, a prompt appears on the screen every time you turn on the computer. You must enter the administrator or user password to start the computer.

## Set password for the secondary storage device

Permanent data is stored on secondary storage devices. Your computer may include one or more solid-state drive or hard disk drive as secondary storage device(s). You can set passwords for secondary storage devices in the setup utility to prevent unauthorized access to your data.

**Attention:** Be extremely careful when setting a hard disk password. If you forget the hard disk password, a Lenovo authorized service personnel cannot reset your password or recover data from the hard disk. You must take your computer to a Lenovo authorized service personnel to have the hard disk drive replaced. Proof of purchase is required and a fee will be charged for parts and service.

- Step 1. Open the UEFI/BIOS setup utility.
- Step 2. Select **Security → Set Hard Disk Password** and press Enter.  
  
**Note:** If your computer model includes more than one secondary storage device, you can set separate password for each device. If you start the setup utility using the user password, you cannot set hard disk password.
- Step 3. Follow on-screen instructions to set both master and user passwords.

**Note:** The master and user hard disk passwords must be set at the same time.

- Step 4. Select **Exit → Exit Saving Changes**.

If the hard disk password is set, you must provide the correct password to start the operating system.

## Change or remove hard disk password

- Step 1. Open the UEFI/BIOS setup utility.
- Step 2. Select **Security**.
- Step 3. Change or remove the hard disk password.

To change or remove master password, select **Change Master Password** and press Enter.

**Note:** If you remove the master hard disk password, the user hard disk password is also removed.

To change user password, select **Change User Password** and press Enter.

**Note:** The user hard disk password cannot be removed separately.

- Step 4. Select **Exit → Exit Saving Changes**.

---

## Chapter 5. Help and support

---

### Frequently asked questions

#### Why does my screen brightness change constantly

Your computer may include an ambient light sensor and the adaptive brightness feature is enabled. The light sensor can detect the intensity of the surrounding light. Using data provided by the sensor, the operating system can dynamically adjust the screen brightness.

The adaptive brightness feature of the operating system can be disabled. For Windows operating systems, adaptive brightness settings are usually found in **Settings → System → Display**.

#### Why does my computer start automatically when I open the lid

Your computer may have Flip to Start enabled. Many Lenovo notebook computers include a sensor that can detect the angle at which the lid is opened. When you open the lid, the sensor can detect this behavior. If Flip to Start is enabled, the computer will respond by starting up automatically.

If you don't like this feature, you can disable it. Flip to Start can be enabled and disabled in:

- Lenovo Vantage, Lenovo PC Manager or Lenovo Smart Engine
- Firmware Setup Utility

#### I enabled some dual-screen settings in the User Center app but they do not seem to work. What are the possible causes?

There are three possible causes that may prevent you from using some dual-screen functions.

- The two displays are not set in extension mode.
- The account you used to sign into Windows is not the "administrator" type.
- The account you used to sign into Windows is the "administrator" type, but another "administrator" account has not signed out of Windows yet.

#### What is the battery's ship mode

When your PC's rechargeable battery is set in ship mode, it is disconnected and does not supply power to the PC.

A battery's ship mode is designed to prevent the battery from over-discharging, a phenomenon that is known to significantly reduce the battery capacity. Over-discharge happens when a lithium battery is at a low charge level for an extended period.

In the real world, it may take a considerable amount of time for the PC to be delivered from the manufacturer to your reseller and then from the reseller to you. The PC's rechargeable battery is set to ship mode at the factory to prevent over-discharge during this process. Before turning on your PC for the first time, plug your PC into an electrical outlet, and the battery's ship mode is instantly disabled.

---

### Self-help resources

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

Resources	How to access?
Troubleshooting and frequently asked questions	<ul style="list-style-type: none"> <li>• <a href="https://www.lenovo.com/tips">https://www.lenovo.com/tips</a></li> <li>• <a href="https://forums.lenovo.com">https://forums.lenovo.com</a></li> </ul>
Accessibility information	<a href="https://www.lenovo.com/accessibility">https://www.lenovo.com/accessibility</a>
Reset or restore Windows	<ul style="list-style-type: none"> <li>• Use Lenovo recovery options.               <ol style="list-style-type: none"> <li>1. Go to <a href="https://support.lenovo.com/HowToCreateLenovoRecovery">https://support.lenovo.com/HowToCreateLenovoRecovery</a>.</li> <li>2. Follow the on-screen instructions.</li> </ol> </li> <li>• Use Windows recovery options.               <ol style="list-style-type: none"> <li>1. Go to <a href="https://pcsupport.lenovo.com">https://pcsupport.lenovo.com</a>.</li> <li>2. Detect your computer or manually select your computer model.</li> <li>3. Click <b>Diagnostics → Operating System Diagnostics</b> and then follow the on-screen instructions.</li> </ol> </li> </ul>
Use Lenovo Vantage or Lenovo PC Manager to:	Use Windows Search.
<ul style="list-style-type: none"> <li>• Download and install the latest drivers and firmware.</li> <li>• Configure hardware settings</li> <li>• Diagnose computer hardware problems.</li> <li>• Check the computer warranty status.</li> </ul>	
Product documentation:	
<ul style="list-style-type: none"> <li>• <a href="#">Generic Safety and Compliance Notices</a></li> <li>• <i>Safety and Warranty Guide</i></li> <li>• <i>Setup Guide</i></li> <li>• <i>This User Guide</i></li> <li>• <i>Regulatory Notice</i></li> </ul>	<ol style="list-style-type: none"> <li>1. Go to <a href="https://support.lenovo.com">https://support.lenovo.com</a>.</li> <li>2. Detect your computer or select computer model manually.</li> <li>3. Select <b>Documentation</b> and filter out the documentation you want.</li> </ol>
Lenovo Support Web site with the latest support information of the following:	
<ul style="list-style-type: none"> <li>• Drivers and software</li> <li>• Diagnostic solutions</li> <li>• Product and service warranty</li> <li>• Product and parts details</li> <li>• Knowledge base and frequently asked questions</li> </ul>	Visit <a href="https://support.lenovo.com">https://support.lenovo.com</a>
Windows help information	<ul style="list-style-type: none"> <li>• Use <b>Get Help</b> or <b>Tips</b>.</li> <li>• Use Windows Search or the Cortana® personal assistant.</li> <li>• Microsoft support Web site: <a href="https://support.microsoft.com">https://support.microsoft.com</a></li> </ul>

## What is a CRU?

Customer replaceable units (CRUs) are parts that can be upgraded or replaced by the customer. A Lenovo computer may contain the following types of CRUs:

## Self-service CRU

Parts that can be installed or replaced easily by customer themselves or by trained service technicians at an additional cost.

## Optional-service CRU

Parts that can be installed or replaced by customers with a greater skill level. Trained service technicians can also provide service to install or replace the parts under the type of warranty designated for the customer's machine.

If you intend to install a CRU, Lenovo will ship the CRU to you. 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* at [https://www.lenovo.com/warranty/llw\\_02](https://www.lenovo.com/warranty/llw_02).

## CRUs for your product model

The table below lists the CRUs and CRU types that are defined for your product model.

Part	Self-service CRU	Optional-service CRU
ac power adapter	X	
Yoga Book 9 Bluetooth KB	X	
Yoga Book 9 folio case	X	
Lenovo Digital Pen 3	X	
Lenovo 600 Bluetooth Silent Mouse*	X	

### Notes:

- CRU replacement instruction is provided in one or more of the following publications and are available from Lenovo at any time upon your request.
  - the product *User Guide*
  - the printed publications that came with the product
- Replacement of any parts not listed above, including the built-in rechargeable battery, must be done by a Lenovo-authorized repair facility or technician. Go to <https://support.lenovo.com/partnerlocation> for more information.
- Parts labeled with an asterisk (“\*”) are available on selected product models.

## 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

Record product information and problem details before you contact Lenovo.

Product information	Problem symptoms and details
<ul style="list-style-type: none"> <li>Product name</li> <li>Machine type and serial number</li> </ul>	<ul style="list-style-type: none"> <li>What is the problem? Is it continuous or intermittent?</li> <li>Any error message or error code?</li> <li>What operating system are you using? Which version?</li> <li>Which software applications were running at the time of the problem?</li> <li>Can the problem be reproduced? If so, how?</li> </ul>

**Note:** The product name and serial number can usually be found on the bottom of the computer, either printed on a label or etched on the cover.

## Lenovo Customer Support Center

During the warranty period, you can call Lenovo Customer Support Center for help.

### Telephone numbers

For a list of the Lenovo Support phone numbers for your country or region, go to <https://pcsupport.lenovo.com/supportphonenumberlist>.

**Note:** Phone numbers are subject to change without notice. If the number for your country or region is not provided, contact your Lenovo reseller or Lenovo marketing representative.

### Services 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.

### Services not covered

- Replacement or use of parts not manufactured for or by Lenovo or nonwarranted parts
- Identification of software problem sources
- Configuration of UEFI/BIOS as part of an installation or upgrade
- 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 apply to your Lenovo hardware product, see "Warranty information" in the *Safety and Warranty Guide* that comes with your computer.

## 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.

---

## 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://support.lenovo.com>

### **Trademarks**

Lenovo and the Lenovo logo are trademarks of Lenovo. Thunderbolt is a trademark of Intel Corporation or its subsidiaries. Microsoft, Windows, OneDrive, Outlook, Skype, Office 365 and Cortana are trademarks of the Microsoft group of companies. DisplayPort is a trademark of the Video Electronics Standards Association. Wi-Fi is a registered trademark of Wi-Fi Alliance. USB Type-C is a registered trademark of USB Implementers Forum. All other trademarks are the property of their respective owners.