

**Lenovo**

**ThinkCentre**

ThinkCentre TIO Flex 24v

User's Guide

Machine Types: 12BN

**Think**

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## Product numbers

F22238FT1

12BN-MAR3-WW



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# Safety Information

## General safety guidelines

For tips to help you use your computer safely, go to:  
<http://www.lenovo.com/safety>

Before installing this product, read the Safety Information.

Avant d'installer ce produit, lisez les consignes de sécurité.

Vor der Installation dieses Produkts die Sicherheitshinweise lesen.

Πριν εγκαταστήσετε το προϊόν αυτό, διαβάστε τις πληροφορίες ασφαλείας (safety information).

לפני שתתקיננו מוצר זה, קראו את הוראות הבטיחות.

A termék telepítése előtt olvassa el a Biztonsági előírásokat!

Prima di installare questo prodotto, leggere le Informazioni sulla Sicurezza

Antes de instalar este produto, leia as Informações de Segurança.

Läs säkerhetsinformationen innan du installerar den här produkten.

Prije instalacije ovog produkta obavezno pročitajte Sigurnosne Upute.

Les sikkerhetsinformasjonen (Safety Information) før du installerer dette produktet.

Przed zainstalowaniem tego produktu, należy zapoznać się z książką "Informacje dotyczące bezpieczeństwa" (Safety Information).

Пред да се инсталира овој продукт, прочитајте информацијата за безбедност.

Pred inštaláciou tohto zariadenia si peèitajte Bezpeènostné predpisy.

Pred namestitvijo tega proizvoda preberite Varnostne informacije.

Ennen kuin asennat t m n tuotteen, lue turvaohjeet kohdasta Safety Information.

Před instalací tohoto produktu si přečtete Bezpečnostní informace.

在安裝本产品之前，请仔细阅读 Safety Information (安全信息)。

安裝本產品之前，請先閱讀「安全資訊」。

يجب قراءة إرشادات السلامة قبل تشغيل هذا المنتج.

Læs sikkerhedsforskrifterne, før du installerer dette produkt.

製品の設置の前に、安全情報をお読みください。

본 제품을 설치하기 전에 안전 정보를 읽으십시오.

Antes de instalar este producto lea la información de seguridad.

Antes de instalar este produto, leia as Informações de Segurança.

Перед установкой продукта прочтите инструкции по технике безопасности.

Lees voordat u dit product installeert eerst de veiligheidsvoorschriften.

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# Safety and Maintenance Guidelines

## Important Safety Information

The power cord is designed for use with your monitor. To use a different cord, use only a power source and connection compatible with this monitor.



**WARNING:** Always connect your monitor, the computer, and other equipment to a grounded (earthed) power outlet. To reduce the risk of electric shock or damage to your equipment, do not disable the power cord grounding feature. The grounding plug is an important safety feature.



**WARNING:** For your safety, be sure that the grounded power outlet you plug the power cord into is easily accessible to the operator and located as close to the equipment as possible. To disconnect power from the equipment, unplug the power cord from the power outlet by grasping the plug firmly. Never pull on the cord.



**CAUTION:** To protect your monitor, as well as your computer, connect all power cords for your computer and its peripheral devices (such as a monitor, printer, or scanner) to a surge protection device such as a power strip with surge protection or uninterruptible power supply (UPS). Not all power strips provide surge protection; the power strips must be specifically labelled as having this ability. Use a power strip whose manufacturer offers a damage replacement policy, so you can replace your equipment if surge protection fails.



**CAUTION:** A certified power supply cord has to be used with this equipment. The relevant national installation and/or equipment regulations shall be considered. A certified power supply cord not lighter than ordinary polyvinyl chloride flexible cord according to IEC 60227 (designation H05VV-F 3G 0.75mm<sup>2</sup> or H05VVH2-F2 3G 0.75mm<sup>2</sup>) shall be used. An alternative flexible cord is synthetic rubber.

## Safety Precautions

- Use only a power source and connection compatible with this monitor, as indicated on the label/back plate of the monitor.
- Be sure the total ampere rating of the products connected to the outlet does not exceed the current rating of the electrical outlet, and the total ampere rating of the products connected to the power cord does not exceed the rating of the power cord. Look on the power label to determine the ampere rating (Amps or A) for each device.
- Install your monitor near a power outlet that you can easily reach. Disconnect the monitor by grasping the plug firmly and pulling it from the outlet. Never disconnect the monitor by pulling the cord.
- Do not allow anything to rest on the power cord. Do not walk on the cord.
- While using VESA mount application, the AC Inlet must face to down side. Do not face any other position.

## Maintenance Guidelines

To enhance the performance and extend the life of your monitor:

- Do not open your monitor cabinet or attempt to service this product yourself. If your monitor is not operating properly or has been dropped or damaged, contact your Lenovo authorized dealer, reseller, or service provider.
- Adjust only those controls that are described in the operating instructions.
- Turn your monitor off when not in use. You can substantially increase the life expectancy of the monitor by using a screen saver program and turning off the monitor when not in use.
- Keep your monitor in a well-ventilated area, away from excessive light, heat, or moisture.
- Slots and openings in the cabinet are provided for ventilation. These openings must not be blocked or covered. Never push objects of any kind into cabinet slots or other openings.
- Unplug the monitor from the power outlet before cleaning. Do not use liquid cleaners or aerosol cleaners.
- Do not drop the monitor or place it on an unstable surface.
- When removing the monitor base, you must lay the monitor face down on a soft area to prevent it from getting scratched, defaced, or broken.

## Cleaning the Monitor

The monitor is a high-quality optical device that requires special care when cleaning. To clean the monitor, follow these steps:

1. Turn off the computer and the monitor.
2. Unplug your monitor from the power outlet before cleaning.



**CAUTION:** Do not use benzene, thinner, ammonia, or any volatile substance to clean the monitor screen or cabinet. These chemicals may damage the monitor. Do not use liquid or aerosol cleaners. Never use water to clean an LCD screen.

3. Wipe the screen with a dry, soft, clean cloth. If the screen requires additional cleaning, use an antistatic screen cleaner.
4. Dust the monitor housing. Use a damp cloth to clean the cabinet. If the cabinet requires additional cleaning, use a clean cloth dampened with isopropyl alcohol.
5. Plug in the monitor.
6. Turn on the monitor and the computer.

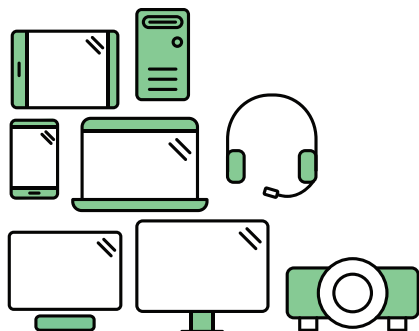
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## TCO Certified

A third-party certification according to ISO 14024



Toward sustainable IT products



## Say hello to a more sustainable product

IT products are associated with a wide range of sustainability risks throughout their life cycle. Human rights violations are common in the factories. Harmful substances are used both in products and their manufacture. Products can often have a short lifespan because of poor ergonomics, low quality and when they are not able to be repaired or upgraded.

**This product is a better choice.** It meets all the criteria in TCO Certified, the world's most comprehensive sustainability certification for IT products. Thank you for making a responsible product choice, that help drive progress towards a more sustainable future!

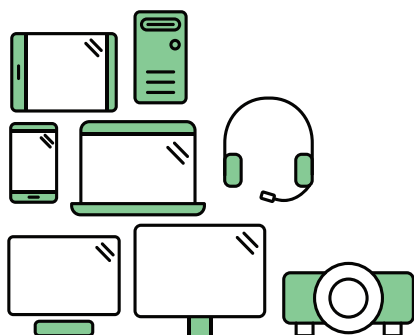
Criteria in TCO Certified have a life-cycle perspective and balance environmental and social responsibility. Conformity is verified by independent and approved verifiers that specialize in IT products, social responsibility or other sustainability issues. Verification is done both before and after the certificate is issued, covering the entire validity period. The process also includes ensuring that corrective actions are implemented in all cases of factory non-conformities. And last but not least, to make sure that the certification and independent verification is accurate, both TCO Certified and the verifiers are reviewed regularly.

### Want to know more?

Read information about TCO Certified, full criteria documents, news and updates at [tcocertified.com](https://tcocertified.com). On the website you'll also find our Product Finder, which presents a complete, searchable listing of certified products.



Toward sustainable IT products



## Say hello to a more sustainable product

IT products are associated with a wide range of sustainability risks throughout their life cycle. Human rights violations occur in the supply chain. Harmful substances are used both in products and their manufacture. Products can often have a short lifespan because of poor ergonomics, low quality and when they are not able to be repaired or upgraded.

**This product is a better choice.** It meets all the criteria in TCO Certified, the world's most comprehensive sustainability certification for IT products. Additionally, it fulfills the requirements of TCO Certified Edge, the supplemental certification that recognizes leading-edge products that exceed typical performance in a particular sustainability attribute. At our Product Finder ([tcocertified.com/product-finder](https://tcocertified.com/product-finder)) you can find out which TCO Certified Edge criterion or criteria this product meets.

Criteria in TCO Certified have a life-cycle perspective and balance environmental and social responsibility. Compliance is verified by independent verification organizations that specialize in IT products, social responsibility or other sustainability issues. Verification is done both before and after the certificate is issued, covering the entire validity period. The process also includes ensuring that corrective actions are implemented in all cases of factory non-conformities.

Thank you for making a responsible product choice, that help drive progress towards a more sustainable future!

### Want to know more?

Read information about TCO Certified, full criteria documents, news and updates at [tcocertified.com](https://tcocertified.com). On the website you'll also find our Product Finder, which presents a complete, searchable listing of certified products.

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# Chapter 1. Getting Started

This User's Guide provides detailed operation instructions for the user. For quick instruction overview, please see the Setup Poster for brief information.

TIO Flex 24v supports Lenovo Accessories and Display Manager\*-**ThinkColour**.

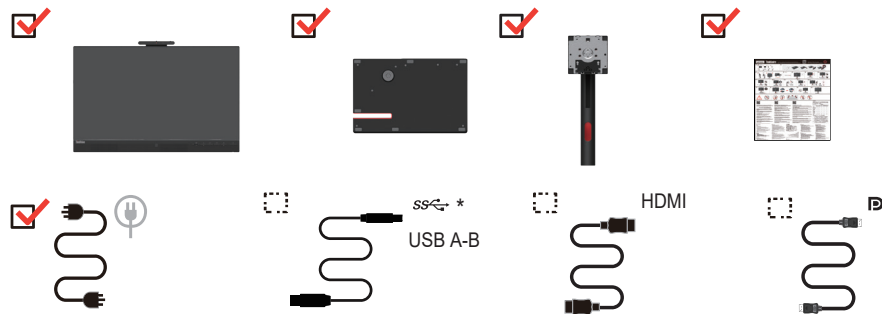
\*Formerly Lenovo Display Control Center.

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## Shipping contents

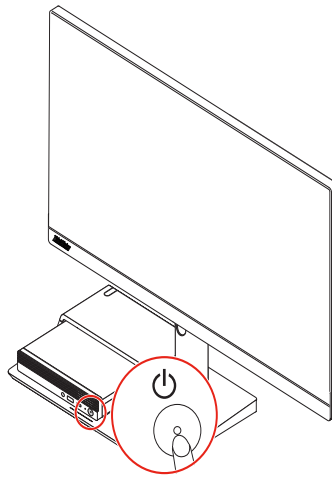
The product package should include the following items:

- Information Flyer
- Flat Panel Monitor
- Power Cord
- DP Cable(Optional)
- HDMI Cable(Optional)
- USB A-B Cable(Optional)
- Base
- Stand



\*: Depending on many factors such as the processing capability of 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 is typically slower than the data rates as defined by the respective USB specifications: - 5 Gbit/s for USB 3.2 Gen 1; 10 Gbit/s for USB 3.2 Gen 2 x 2 Gbit/s for USB 3.2.

- \*\*\*Your monitor supports the following Tinys that can be installed in your monitor:
- \*\*\*Press TINY power button, can power on monitor and TINY together.
- \*\*\*Change input signal under TIO Flex mode (Monitor power off):
- \*\*\*Press monitor power key to turn on monitor then switch the input signal via OSD or hot key.



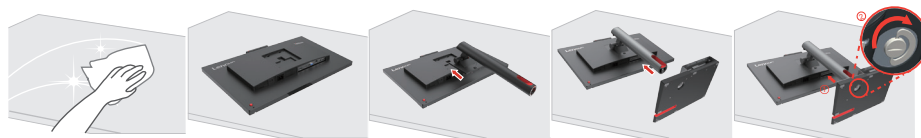
Production support list	TIO power button
ThinkCentre M910q Tiny(Q270)	√
ThinkCentre M910x Tiny(Q270 65w)	√
ThinkCentre M910x Tiny(Q270 w/GPU)	√
ThinkCentre M710q Tiny(B250)	√
ThinkCentre M715q	√
ThinkCentre M625q	√
ThinkStation P320	√
ThinkCentre M720q	√
ThinkCentre M720q-KT	√
ThinkCentre M920q	√
ThinkCentre M920x	√
ThinkCentre M920x-KT	√
ThinkStation P330	√
ThinkCentre M75q-1	√
ThinkCentre M90q-1	√
ThinkCentre M930q	√
ThinkCentre M80q-1	√
ThinkCentre M70q-1	√
ThinkCentre M730q	√
ThinkCentre M75q Gen2	√
Thinkstation P340	√
ThinkCentre M90q Gen2	√
ThinkCentre M70q Gen2	√
ThinkCentre M740q	√
ThinkStation P350	√
ThinkCentre M70q Gen 3	√
ThinkCentre M80q Gen 3	√
ThinkCentre M90q Gen 3	√
ThinkCentre M750q	√
ThinkCentre M950q	√
ThinkStation P360	√

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## Notice for use

To set up your monitor, please see the illustrations below.

**Note:** Do not touch the screen of the monitor. The screen is made of glass and can be damaged by rough handling or excessive pressure.



1. Take out the Top cushion and accessories.
2. Mounting the stand to monitor's recess.
  - Insert the three tabs on the upper part of the stand to the groove on the back of the monitor.
  - Press the stand down till it snaps into place.
3. Insert the base towards the stand and tighten the thumbscrew.
4. Stand up the monitor with both hands carefully.

**Note:** To connect VESA mounting accessories, refer to “Wall Mounting (Optional)” on page 2-10.

## Product overview

In this section, we will describe how to adjust the position of the monitor; how to set user controls; how to use the cable lock slot.

### Adjustment type

#### Tilt

Please see the illustration below for an example of the tilt range.



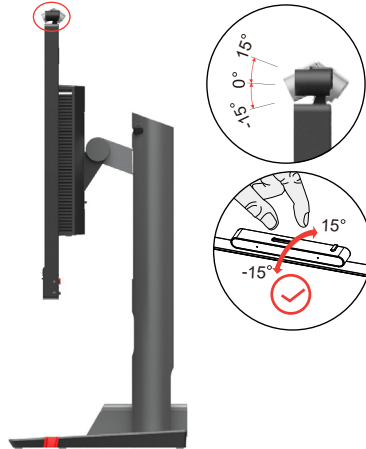
## Height Adjustment

To adjust the height, the user needs to press or lift the monitor.



## Height Adjustment

Please see the illustration below for an example of the tilt range.



## Monitor controls

The keypad controls on the panel frame are accesses to various functions.



For information on how to utilize these keypad controls, please see “Adjusting your monitor image” on page 2-3.

## Cable lock slot

Your monitor is equipped with a cable lock slot located on the rear of your monitor.



## IR-Camera

Your monitor has embedded integrated IR Camera Module; it can be used as a normal webcam.



Slide the camera shutter open or close to enable/disable the camera.

a. Slide to open.

b. Slide to close.



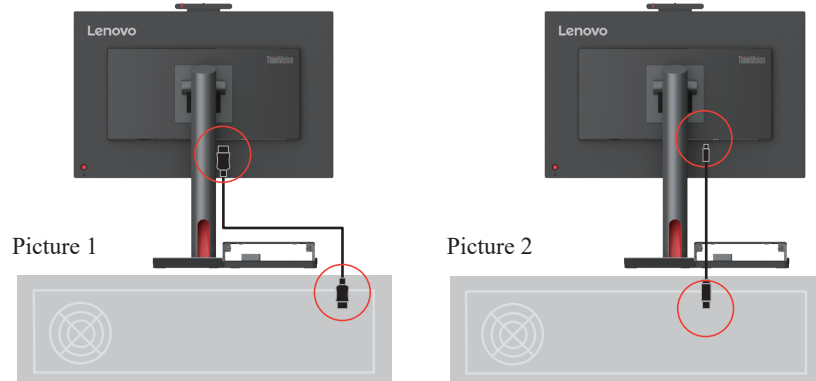
**Note:** Camera function only support window 10, windows 11.

After setting up the “Windows hello” application, you can login your Windows 10 or Windows 11 operating system with the function of face-recognition.

**Note:** To set up “windows hello”, please see “Windows Hello setup ”on page 1-12.

## Speaker

Your monitor has embedded a pair of speakers with 3W, and it can support DP or HDMI audio output and USB audio output. The USB cable need plug in when you use USB audio channel (picture2). DP or HDMI audio output doesn't need USB cable but DP or HDMI cable (picture 1).



Use Volume control button to adjust volume.



### Note:

1. To prevent possible hearing damage, do not listen at high volume levels for long periods. Warning for excessive sound pressure from earphones and headphones. Excessive sound pressure from earphones and headphones can cause hearing loss. Adjustment of the equalizer to maximum increases the earphones and headphones output voltage and therefore the sound pressure level.
2. Volume synchronization with the Windows volume.
3. We recommend that you connect USB-B and select a USB audio (Echo Canceling Speakerphone) device for better audio and video experience.
4. When only HDMI/DP cable is connected, we recommend that you connect USB-B at the same time for better audio and video experience.

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## Setting up your monitor

This section provides information on how to set up your monitor.

### Assembling your monitor

To assemble your monitor, follow the two parts below one by one:

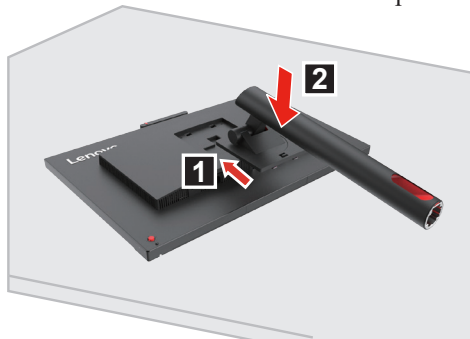
Part 1: Install the full-function monitor stand.

Part 2: Install the Tiny

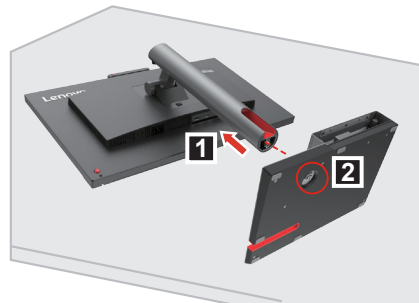
Part 1: Install the full-function monitor stand.

Note: The full-function monitor stand includes one monitor stand and one stand base.

1. Place a soft, clean towel or cloth on the desk or surface. Hold the sides of your monitor and gently lay it down so that the screen is against the surface and the cover is facing up.
2. Insert the two metal tabs on the stand into the corresponding holes on the rear of the monitor. Then, pivot the stand downward until it clicks into position.

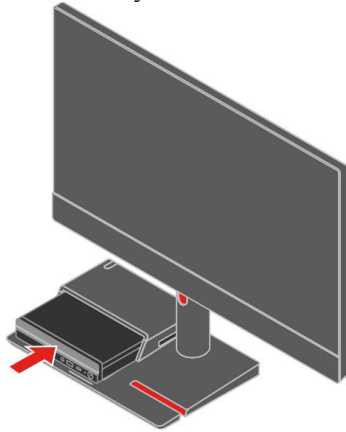


3. Insert the three metal studs on the base into the corresponding holes in the stand. Then, tighten the screw as shown to secure the stand.

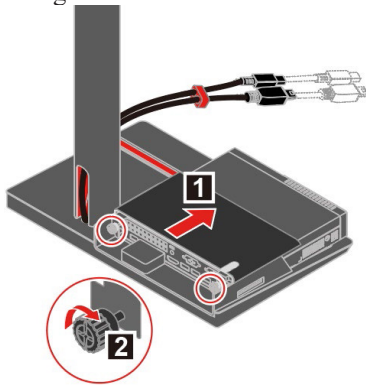


Part 2: Install the Tiny.

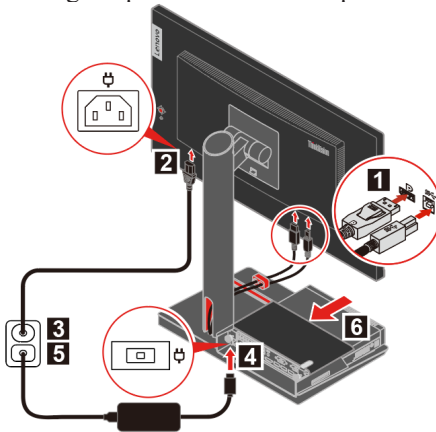
1. Insert Tiny into the base slot.



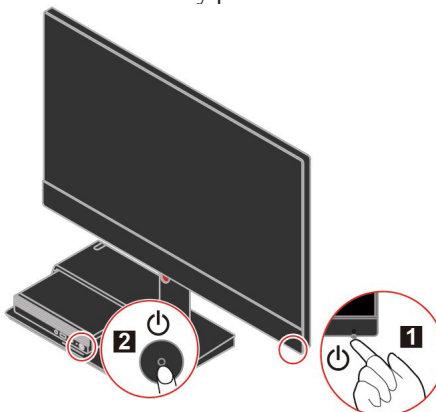
2. Tighten the screw to secure the Tiny.



3. Plug the power cord into the power supply and connect the signal cable to the monitor.



4. Turn on the Tiny power button to start.



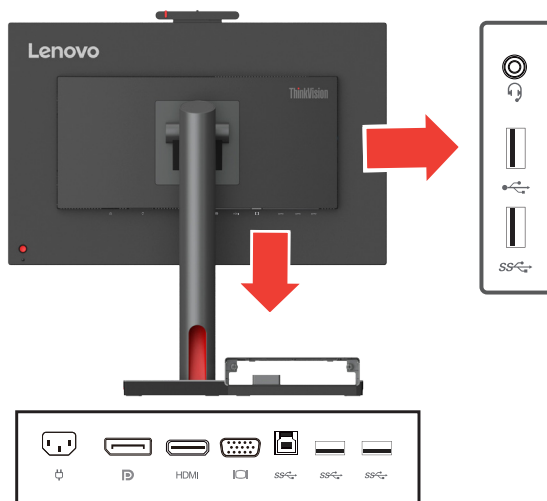
## Connecting and turning on your monitor

**Note:** Before performing this procedure, be sure to read “Safety Information” on page iii.

1. Power off your computer and all attached devices, then unplug the computer power cord.



2. Connect the cables as shown below.



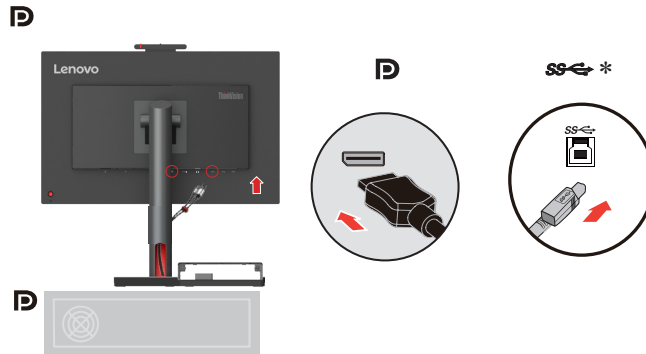
3. Connect one end of the HDMI cable to the monitor HDMI connector and the other end to the computer.



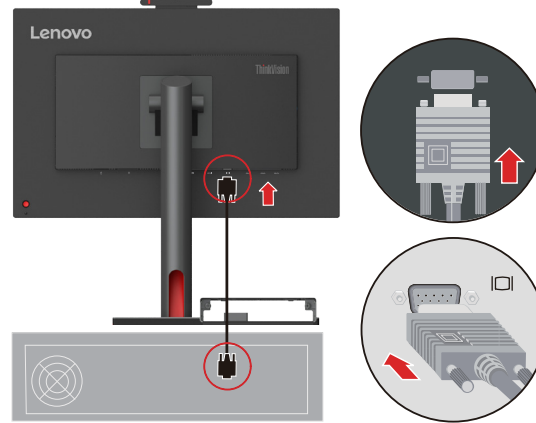
**Note:** Lenovo recommends that customers who require to use the HDMI input on their monitors purchase the “Lenovo HDMI to HDMI Cable OB47070” website: [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories).

4. For tiny in TIO Flex Stand connecting with monitor.

Note: 2-in-1 connecting, DP+USB(Dp for display, USB as upstream link port to monitor for audio, camera, touch, USB port extension etc. monitor features).



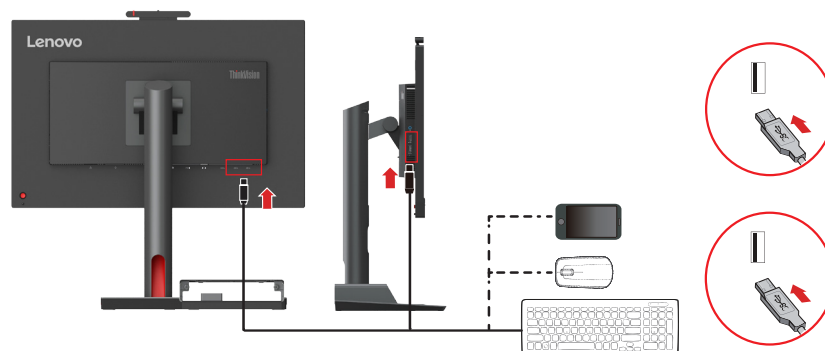
5. For computer in Analog Signal Cable connecting.



6. Connect one end of the USB cable to the USB downstream terminal on the side of the monitor, and connect the other end of the USB cable to an appropriate USB port on your device.

Note:

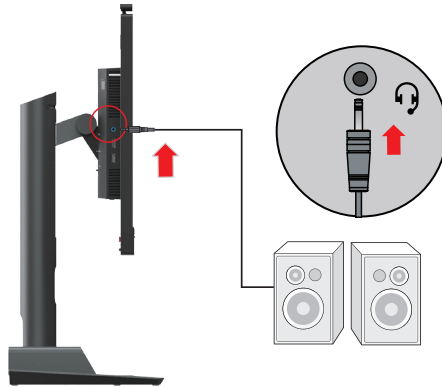
1. The USB downstream port does not provide power while the monitor is switched off.



7. Connect the speaker's audio cable and audio jack of monitor to transfer audio source from Display Port, HDMI.

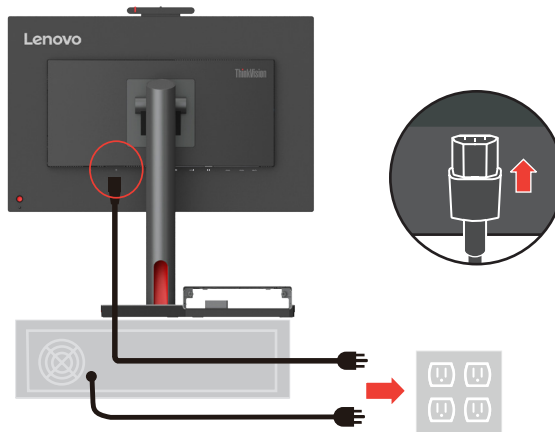
**Note:** The audio outputs in Display Port, HDMI modes.

Please be aware that excessive and/or extreme volume might damage your hearing ability.

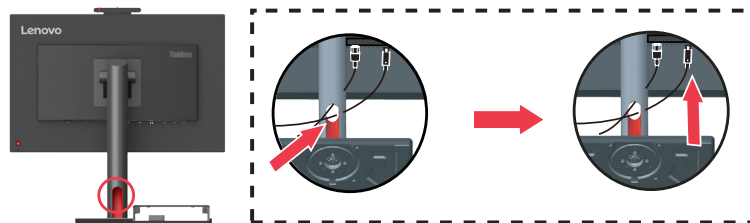


8. Plug the power cord into the monitor, and then plug the monitor power cord and computer cord into a grounded power outlet.

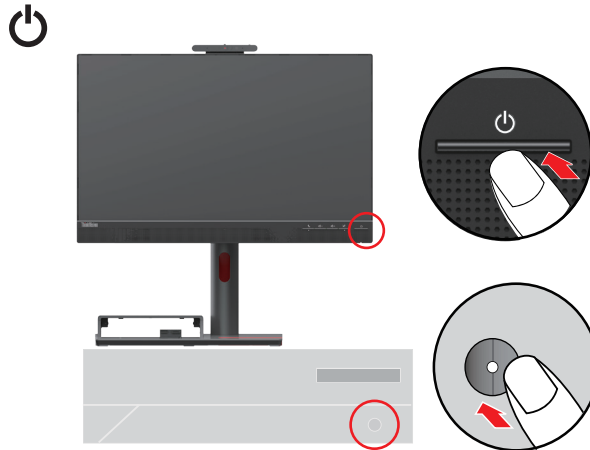
**Note:** A certified power supply cord has to be used with this equipment. The relevant national (regional) installation and/or equipment regulations shall be considered. The certified power cord used should not be lighter than the ordinary PVC flexible cord specified by IEC 60227 (marking H05VV-F 3G 0.75mm<sup>2</sup> or H05VVH2-F2 3G 0.75mm<sup>2</sup>). According to IEC 60245 (marking H05RR-F 3G 0.75mm<sup>2</sup>), synthetic rubber cord should be used.



9. Assembled cables with cable clip as shown below.



10. Power on the monitor and the computer.



11. When you install the monitor driver, download the driver that corresponds to your monitor model from the Lenovo website [https://pcsupport.lenovo.com/solutions/tio\\_flex\\_24v](https://pcsupport.lenovo.com/solutions/tio_flex_24v). Refer to the “Installing the monitor driver in Windows 10” on page 3-5 section to install the driver.



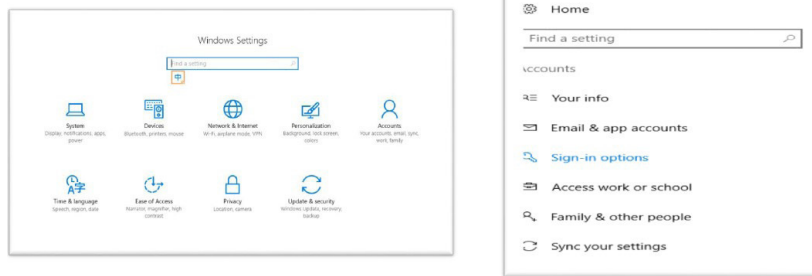
## Registering your option

Thank you for purchasing this Lenovo™ product. Please take a few moments to register your Product and provide us with information that will help Lenovo to better serve you in the future. Your feedback is valuable to us in developing products and services, as well as in developing better ways to communicate with you. Register your option on the following Website:  
<http://www.lenovo.com/register>.  
Lenovo will send you information and updates on your registered product unless you indicate on the Web site questionnaire that you do not want to receive further information.

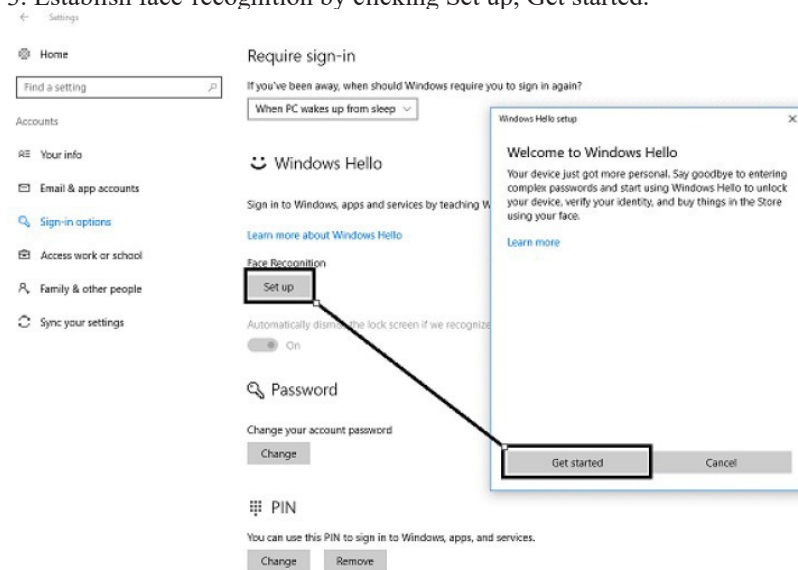
## Windows Hello setup (Windows 10)

Note: To set up “Windows Hello”, do the following:

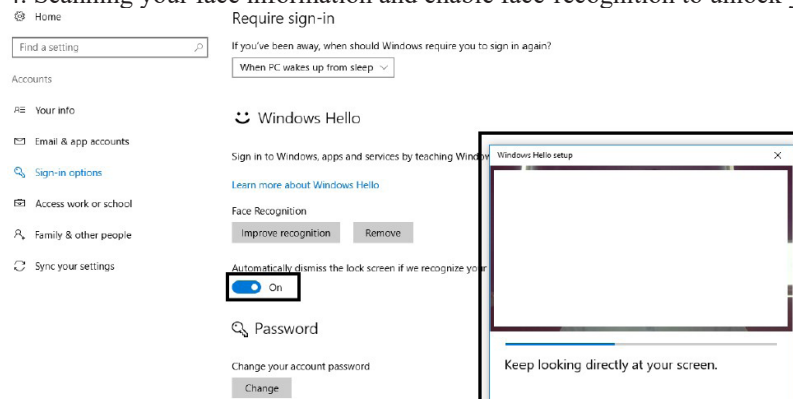
1. Press “Windows” + “I” and then click Accounts, choose “Sign-in options”.



2. Setup PIN number.
3. Establish face-recognition by clicking Set up, Get started.



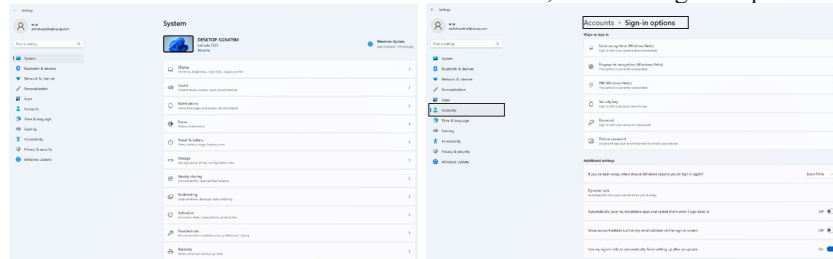
4. Scanning your face information and enable face-recognition to unlock your computer.



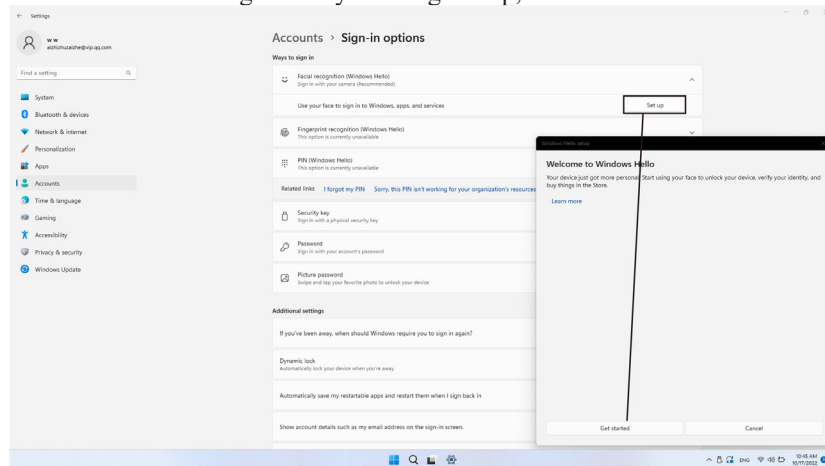
# Windows Hello setup (Windows 11)

Note: To set up “Windows Hello”, do the following:

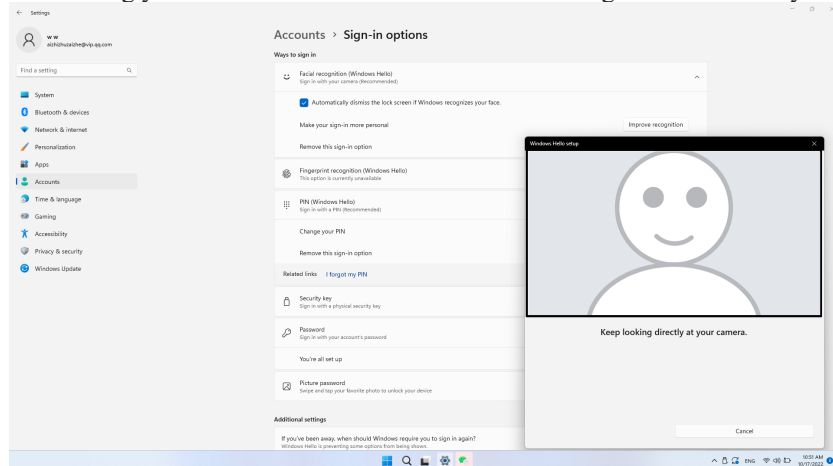
1. Press “WIN”+“I” to enter system configuration.
2. Press “Windows” + “I” and then click Accounts, choose “Sign-in options”.



3. Setup PIN number.
4. Establish face-recognition by clicking Set up, Get started.



5. Scanning your face information and enable face-recognition to unlock your computer.



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## Chapter 2. Adjusting and Using the Monitor

This section will give you information on adjusting and using your monitor.

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### Comfort and accessibility

Good ergonomic design is important to get the most from your personal computer and to avoid discomfort. Arrange your workplace and the equipment you use to suit your individual needs and the kind of work that you perform. In addition, use healthy work habits to maximize your performance and comfort while using your computer. For more detailed information on any of these topics, visit the Healthy Computing Website at: <http://www.lenovo.com/healthycomputing/>.

### Arranging your work area

Use a work surface of appropriate height and sufficient working area to allow you to work in comfort. Organize your work area to match the way you use materials and equipment. Keep your work area clean and clear for the materials that you typically use and place the items that you use most frequently, such as the computer mouse or telephone, within the easiest reach.

Equipment layout and setup play a large role in your working posture. The following topics describe how to optimize equipment setup to achieve and maintain good working posture.

### Positioning your monitor

Position and adjust your computer monitor for comfortable viewing by considering the following items:

- **Viewing distance:** Recommended viewing distance between the eye and the monitor screen is 1.5 x the diagonal of the screen. Solutions in meeting this required distance in cramped office situations include pulling the desk away from the wall or divider to make room for the monitor, using flat panel or compact displays to place the monitor in the desk corner, or placing the keyboard in an adjustable drawer to create a deeper working surface.

1.5 times of screen diagonal



- **Monitor height:** Position the monitor so your head and neck are in a comfortable and neutral (vertical, or upright) position. If your monitor does not have height adjustments, you might have to place books or other sturdy objects under the base of the monitor to achieve the desired height. A general guideline is to position the monitor such that the top of the screen is at or slightly below your eye-height when you are comfortably seated. However, be sure to optimize your monitor height so the line of site between your eyes and the center the monitor suits your preferences for visual distance and comfortable viewing when your eye muscles are in a relaxed state.
- **Tilt:** Adjust the tilt of your monitor to optimize the appearance of the screen content and to accommodate your preferred head and neck posture.
- **General location:** Position your monitor to avoid glare or reflections on the screen from overhead lighting or nearby windows.

The following are some other tips for comfortable viewing of your monitor:

- Use adequate lighting for the type of work you are performing.
- Use the monitor brightness, contrast controls (if equipped) to optimize the image on your screen to meet your visual preferences.
- Keep your monitor screen clean so you can focus on the screen's contents.

Any concentrated and sustained visual activity can be tiring for your eyes. Be sure to periodically look away from your monitor screen and focus on a far object to allow your eye muscles to relax. If you have questions on eye fatigue or visual discomfort, consult a vision care specialist for advice.

## Quick tips for healthy work habits

The following information is a summary of some important factors to consider to help you remain comfortable and productive while you use your computer.

- **Good posture starts with equipment setup:** The layout of your work area and the setup of your computer equipment have a large effect on your posture while using your computer. Be sure to optimize the position and orientation of your equipment by following the tips outlined in “Arranging your work area” on page 2-1 so you can maintain a comfortable and productive posture. Also, be sure to use the adjustment capabilities of your computer components and office furniture to best suit your preferences now and as your preferences change over time.
- **Minor changes in posture can help avoid discomfort:** The longer you sit and work with your computer, the more important it is to observe your working posture. Avoid assuming any one posture for an extended period of time. Periodically make minor modifications in your posture to help deter any discomforts that might arise. Make use of any adjustments that your office furniture or equipment provide to accommodate changes in posture.
- **Regular short breaks help ensure healthy computing:** Because computing work is mainly static activity, short breaks during work are especially important. Periodically, stand up from your work area, stretch, walk around or have a drink etc., to take a short break from using your computer. A short break from work gives your body a welcome change in posture and helps to ensure you remain comfortable and productive while working.

## Accessibility information

Lenovo is committed to providing greater access to information and technology to people with disabilities. With assistive technologies, users can access information in the way most appropriate to their disability. Some of these technologies are already provided in your operating system; others can be purchased through vendors or accessed at:


















[https://lenovo.ssbartgroup.com/lenovo/request\\_vpat.php](https://lenovo.ssbartgroup.com/lenovo/request_vpat.php)

## Adjusting your monitor image

This section describes the control features to adjust your monitor images.

### Using direct access controls

Direct access controls can be used when the On-Screen Display (OSD) is not displayed.















	Icon	Name	Description
1. 	 	Enter key	<ul style="list-style-type: none"><li>• Press to open main menu while there is no any OSD on the screen.</li><li>• Press to enter next level on main menu or sub menu, or enter previous level on adjustment bar.</li><li>• Press and hold for 10 seconds, then the OSD will be Lock/Unlock.</li></ul>
	 	Right key	<ul style="list-style-type: none"><li>• Press to enter next level on main menu or sub menu.</li><li>• Press to open Language select menu while there is no any OSD on the screen.</li></ul>
	 	Left Key	<ul style="list-style-type: none"><li>• Press to exit current OSD or return to previous level.</li><li>• Press and hold for 10 seconds, then the DDC/CI function will be Enabled/ Disabled.</li></ul>
	 	Down Key	<ul style="list-style-type: none"><li>• Press to move to next item on menu.</li><li>• Press to decrease current value on adjustment bar.</li><li>• Press to open Contrast menu while there is no any OSD on the screen.</li></ul>
	 	Up Key	<ul style="list-style-type: none"><li>• Press to move to last item on menu.</li><li>• Press to Increase current value on adjustment bar.</li><li>• Press to open Brightness menu while there is no any OSD on the screen.</li></ul>
2. 	Input Source		It is a shortcut key for directly opening the menu of input source while there is no any OSD on the screen.
	Smart Traffic Light		Press and hold for 3 seconds, then the Smart Traffic Light function will be Off/On.
3. 	Power button		Turns the monitor on/off. White indicates power on. Orange indicates standby/ power saving mode.
	Telephone switch & LED		<ul style="list-style-type: none"><li>• LED will blink in green when there is an incoming call.</li><li>• LED will light up in static green during call.</li><li>• Short press to answer / end call.</li><li>• Long press to reject incoming call.</li></ul> <p>Note: This feature can only be used with the Teams app.</p>
	Volume down & LED		<ul style="list-style-type: none"><li>• Short press to decrease volume.</li><li>• Long press the volume to continuously decrease.</li></ul>
	Volume up & LED		<ul style="list-style-type: none"><li>• Short press to increase the volume.</li><li>• Long press to keep volume up.</li></ul>
	Microphone mute & LED		<ul style="list-style-type: none"><li>• Press to mute and unmute the microphone.</li><li>• When the microphone is muted, the LED lights up static red.</li><li>• LED switches off when microphone is enabled/unmuted.</li></ul>
Note: To enable the Mute and Hook buttons, you need to connect USB-B and select a USB audio (Echo Canceling Speakerphone) device.			

## Using On-Screen Display (OSD) controls

To adjust the settings, the user controls can be viewed through the OSD.



To use the controls:

1. Press  to open the main OSD menu.
2. Use  or  to move among the icons. Select an icon and press  to access the selected function. If there is a sub-menu, you can move between options using  or , then press  to select that function. Use  or  to make adjustments then press  to save.
3. Press  to move backwards through the sub-menus and exit from the OSD.
4. Press and hold  for 10 seconds to lock the OSD. This will prevent accidental adjustments to the OSD. Press and hold  for 10 seconds to unlock the OSD and allow adjustments to the OSD.
5. Enables DDC/CI by default. Use OSD Exit Key, Press and hold  for 10 seconds to disable/enable DDC/CI function. A message "DDC/CI disable" is shown on the screen.
6. The ENERGY STAR option resets all user settings to default values so that the monitor can meet the requirements of Energy Star.






Energy Star is an energy saving program for consumer electronics led by the U.S. government. It was launched in 1992 by EPA and DOE to reduce energy consumption and greenhouse gas emissions. Energy Star logo is a symbol of energy conservation and environmental protection. It improves the concept of energy efficiency of consumers and manufacturers, and effectively guides the market.




The regulation of Energy Star improves energy efficiency and reduces air pollution by using more energy-efficient equipment in homes, offices and factories. One way to achieve this goal is to use management to reduce energy consumption when products are not in use.

The default settings for monitors conform to Energy Star certification. Any changes by users for more features and functionalities may increase power consumption, which will exceed the limitation of Energy Star's standard. If the user changes the options related to energy efficiency when using, such as brightness, color mode, etc., select All Reset Factory or choose the Energy Star option, the power consumption will be restored to the energy efficiency with Energy Star standard.

For more information, please refer to ([www.energystar.gov/products](http://www.energystar.gov/products)). All products of Energy Star will be posted online and can be accessed directly by governments, public institutions and consumers.

Table 2-1. OSD functions

OSD Icon on Main Menu	Submenu	Description	Controls and Adjustments
 Monitor control	Brightness	Adjusts overall brightness	All input ports
	Contrast	Adjusts difference between light and dark areas	
	Dynamic contrast	<ul style="list-style-type: none"> <li>• Off</li> <li>• On</li> </ul>	
	Over drive	<ul style="list-style-type: none"> <li>• Off</li> <li>• Normal</li> <li>• Extreme(14ms/6ms/4ms)</li> </ul>	
	Color mode	<ul style="list-style-type: none"> <li>• sRGB</li> <li>• Neutral</li> <li>• Warm</li> <li>• Cool</li> <li>• Custom</li> <li>• Red: Increases or decreases the saturation of 'Red' in the image.</li> <li>• Green: Increases or decreases the saturation of 'Green' in the image.</li> <li>• Blue: Increases or decreases the saturation of 'Blue' in the image.</li> </ul>	
 Quick settings	Right key	<ul style="list-style-type: none"> <li>• Brightness</li> <li>• Contrast</li> <li>• Color mode</li> <li>• Language</li> </ul>	All input ports
	Up key		
	Down key		
 Port settings	Input signal	<ul style="list-style-type: none"> <li>• Auto</li> <li>• VGA</li> <li>• DisplayPort</li> <li>• HDMI</li> <li>• TIO Flex Mode</li> </ul>	All input ports
	USB Charging	<ul style="list-style-type: none"> <li>• On</li> <li>• Off</li> </ul>	
	DP Select	<ul style="list-style-type: none"> <li>• DP 1.4</li> <li>• DP 1.2</li> </ul>	Only for DP ports
	Video Range	<ul style="list-style-type: none"> <li>• Auto</li> <li>• Full range 0-255</li> <li>• Limited range 16-235</li> </ul>	Only for HDMI ports

OSD Icon on Main Menu	Submenu	Description	Controls and Adjustments
 Advanced settings	Button repeat rate	<ul style="list-style-type: none"><li>• Default</li><li>• Slow</li><li>• Off</li></ul>	All input ports
	Image Position	<ul style="list-style-type: none"><li>• Horizontal Position</li><li>• Vertical Position</li></ul>	Only for VGA ports
	Image setup	<ul style="list-style-type: none"><li>• Automatic</li><li>• Manual</li></ul>	Only for VGA ports
	Aspect ratio	<ul style="list-style-type: none"><li>• Full Screen</li><li>• Orginal AR</li></ul>	All input ports
	Video/Audio Icon	<ul style="list-style-type: none"><li>• Off</li><li>• On</li></ul>	All input ports
	LED indicator	<ul style="list-style-type: none"><li>• Off</li><li>• On</li></ul>	All input ports
	Power button lock	<ul style="list-style-type: none"><li>• Off</li><li>• On</li></ul>	All input ports
 Smart Feature	Smart Traffic Light	<ul style="list-style-type: none"><li>• Off</li><li>• On</li><li>• Auto</li></ul>	All input ports
	Smart Audio	<ul style="list-style-type: none"><li>• Off</li><li>• On</li></ul>	
 Menu settings	Information	Shows resolution, refresh rate, and product details. Note: This screen offers information only, and (does) not allow for setting changes.	All input ports
	Language	Changes languages of menu. Note: The selected language only affects the language of the OSD. It has no effect on any software running on the computer.	
	OSD time out	To automatically turn off OSD after a preset period of time.	
	OSD position	Adjusts menu location.	
	OSD rotation	<ul style="list-style-type: none"><li>• Normal</li><li>• 90</li><li>• 270</li></ul>	
	Transparency	Adjusts menu transparency.	
	Factory Reset	<ul style="list-style-type: none"><li>• Reset</li><li>• No</li></ul>	
*The use of Extreme Mode (response time) may result in reduced display quality when fast moving video graphics are displayed. Users should check Extreme Mode (response time) to verify if it is compatible with any applications they would like to use it with.			

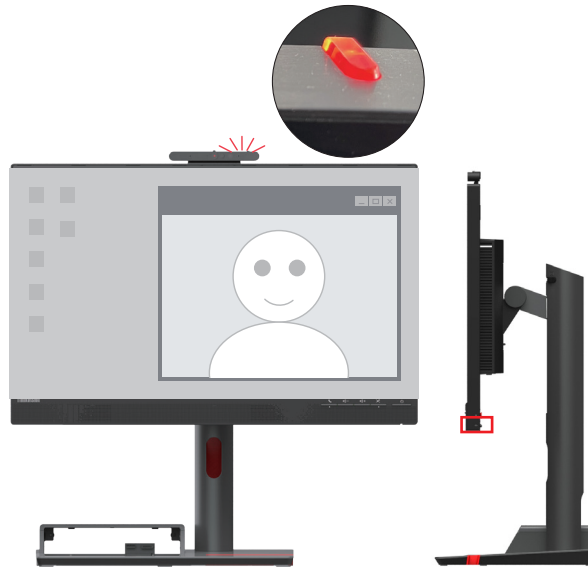
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## Smart Feature

This section describes how to use the Smart Features of this monitor.

### Smart Traffic Light

1. There are On/Off/Auto modes for the light.
2. Press the source key for 3 seconds can easily switch On/Off.
3. The traffic light indicate the monitor working status of camera and microphone at “Auto” mode.



**Note:** To connect USB cable to enable the function.

### Smart Audio

Off: No sound suppression around the microphone.

On: Microphone mainly catch the sound of the front area.

The speech out of catching area will be suppressed obviously but not disappear totally.



**Note:**

1. To connect USB cable to enable the function.
2. The environment, sound reflection or noise volume, will impact the function quality.

## Selecting a supported display mode

The display mode of the monitor uses is controlled by the computer. Therefore, refer to your computer documentation on how to change display modes.

The image size, position and shape might be changed when the display mode changes. This is normal and the image can be re-adjusted using automatic image setup and the image controls.

Unlike CRT monitors, which require a high refresh rate to minimize flicker, LCD or Flat Panel technology is inherently flicker-free.

**Note:** If your system has previously been used with a CRT monitor and is currently configured to a display mode outside the range of this monitor, you may need to reattach the CRT monitor temporarily until you have re-configured the system; preferably to 1920 x 1080 at 60 Hz, which is a common display mode.

The display modes shown below have been optimized at the factory.

*Table 2-2.* Factory set display modes

Address ability	Refresh rate
720 x 400	70 Hz
640 x 480	60 Hz, 72 Hz, 75 Hz
1024 x 768	60 Hz, 70 Hz, 75 Hz
1280 x 1024	60 Hz, 75 Hz
1440 x 900	60 Hz
1600 x 900	60 Hz
1680 x 1050	60 Hz
1920 x 1080	60 Hz, 75Hz(for HDMI,DP ports)

## Understanding power management

Power management is invoked when the computer recognizes that you have not used your mouse or keyboard for a user-definable period. There are several states as described in the table below.

For optimal performance, switch off your monitor at the end of each working day, or whenever you expect to leave it unused for long periods during the day.

Table 2-3. Power indicator

State	Power Indicator	Screen	Restoring Operation	Compliance
On	White	Normal		
Standby/Suspend	Orange	Blank	Press a key or move the mouse There may be a slight delay before the image reappears. <b>Note:</b> Standby also occurs if there is no image output to the monitor.	ENERGY STAR
Off	Off	Blank	Press the power button There may be a slight delay before the image reappears.	ENERGY STAR

## Power Management Modes

VESA Modes	Horizontal Sync	Vertical Sync	Video	Power Indicator	Power Consumption
Normal operation	Active	Active	Active	White	60 W (maximum)* 18W (typical)
Active-off mode	Inactive	Inactive	Off	Amber	Less than 0.5 W
Switch off	-	-	-	Off	Less than 0.3 W

Energy Star	Power consumption
P <sub>on</sub>	13W
E <sub>TEC</sub>	41 kWh

\* **Maximum power consumption with max luminance.**

This document is informational only and reflects laboratory performance. Your product may perform differently, depending on the software, components and peripherals you ordered and shall have no obligation to update such information. Accordingly, the customer should not rely upon this information in making decisions about electrical tolerances or otherwise. No warranty as to accuracy or completeness is expressed or implied.

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## Caring for your monitor

Be sure to turn off the power before you perform any maintenance on the monitor.

**Do not:**

- Apply water or liquid directly to your monitor.
- Use solvents or abrasives.
- Use flammable cleaning materials to clean your monitor or any other electrical equipment.
- Touch the screen area of your monitor with sharp or abrasive items. This type of contact may cause permanent damage to your screen.
- Use any cleaner which contains an anti-static solution or similar additives. This may harm the coating of the screen area.

**Do:**

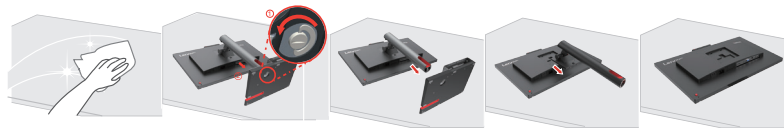
- Lightly dampen a soft cloth with water and use this to gently wipe the covers and the screen.
- Remove grease or finger marks with a damp cloth and a little mild detergent.

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## Detaching the monitor base and stand

Step 1: Place the monitor on a soft and flat surface.

Step 2: Remove the screws from base before detaching base and stand from the monitor.



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## Wall Mounting (Optional)

Refer to the instructions that come with the base mounting kit. To convert your LCD display from a desk-mounted to a wall-mounted display, do the following:

Step 1: Verify that the Power button is turned Off, then disconnect the power cord.

Step 2: Lay the LCD display face down on a towel or blanket.

Step 3: Remove the base from the monitor, refer to "Detaching the monitor base and stand".

Step 4: Attach the mounting bracket from the VESA compatible wall mounting kit (100mm x100mm distance), VESA Mounting Screw M4 x 12 mm.



Step 5: Attach the LCD display to the wall, following the instructions in the wall-mounting kit.

For use only with UL Listed Wall Mount Bracket with minimum weight/load: 8kg

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## Chapter 3. Reference Information

This section contains monitor specifications, instructions to manually install the monitor driver, troubleshooting information, and service information.

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### Monitor specifications

Table 3-1. Monitor specifications for type-model TIO Flex 24v/12BN-MAR3-WW

Size	Depth	222.99 mm (8.78 in.)
	Height	548.59 mm (22.60 in.)
	Width	539.8 mm (21.25 in.)
Stand	Tilt	Range: -5°~23°
	Height adjustment	125 mm
VESA mount	Supported	100 mm x 100 mm (3.94 in. x 3.94 in.)
Image	Viewable image size	605 mm (23.8 in.)
	Maximum height	296.46 mm (11.67 in.)
	Maximum width	527.04 mm (20.75 in.)
	Pixel pitch	0.2745 mm (0.01 in.)
AC/DC adapter	Model	100-240 VAC
	Maximum	1.5A
Power consumption <b>Note:</b> Power consumption figures are for the monitor and the power supply combined	Normal operation	<60W (max) <18W (Typical)
	Standby/Suspend	<0.5 W
	Off	<0.3 W
Video input (HDMI)	Input signal	HDMI
	Horizontal addressability	1920 pixels (maximum)
	Vertical addressability	1080 lines (maximum)
	Clock frequency	170 MHz
Video input (DP)	Input signal	DP
	Horizontal addressability	1920 pixels (maximum)
	Vertical addressability	1080 lines (maximum)
	Clock frequency	2.7Gbps *4lane
Video input (VGA)	Input signal	VGA
	Horizontal addressability	1920 pixels (maximum)
	Vertical addressability	1080 lines (maximum)
	Clock frequency	170 MHz

Speaker	Rated power	3 W
	Impedance	4 ohm
Communications	VESA DDC	CI
Supported Display Modes	Horizontal frequency	15 - 84 KHz
	Vertical frequency	48 - 75 Hz
	Native Resolution	1920 × 1080 @ 60 Hz
Temperature	Operating	0° to 40°C (32° to 104°F)
	Storage	-20° to 60°C (-4° to 140°F)
	Shipping	-20° to 60°C (-4° to 140°F)
Humidity	Operating	10% to 80% non-condensing
	Storage	5% to 95% non-condensing
	Shipping	5% to 95% non-condensing

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## Troubleshooting

If you have a problem setting up or using your monitor, you might be able to solve it yourself. Before calling your dealer or Lenovo, try the suggested actions that are appropriate to your problem.

Table 3-2. Troubleshooting

Problem	Possible cause	Suggested action	Reference
The words “Out of Range” are shown on the screen, and the power indicator is flashing white.	The system is set to a display mode which is not supported by the monitor.	If you are replacing an old monitor, reconnect it and adjust the display mode to within the specified range for your new monitor.  If using a Windows system, restart the system in safe mode, then select a supported display mode for your computer.  If these options do not work, contact the Support Center.	“Selecting a supported display mode” on page 2-8
The image quality is unacceptable.	The video signal cable is not connected with the monitor or system completely.	Be sure the signal cable is firmly plugged into the system and monitor.	“Connecting and turning on your monitor” on page 1-9
	The color settings may be incorrect.	Select another color setting from the OSD menu.	“Adjusting your monitor image” on page 2-3
	The automatic image setup function was not performed.	Perform automatic image setup.	“Adjusting your monitor image” on page 2-3
The power indicator is not lit and there is no image.	<ul style="list-style-type: none"><li>• The monitor’s power switch is not switched on.</li><li>• The power cord is loose or disconnected.</li><li>• There is no power at the outlet.</li></ul>	<ul style="list-style-type: none"><li>• Be sure the power cord is connected properly.</li><li>• Be sure the outlet has power.</li><li>• Power on the monitor.</li><li>• Try using another power cord.</li><li>• Try using another electrical outlet.</li></ul>	“Connecting and turning on your monitor” on page 1-9
Screen is blank and power indicator is amber.	The monitor is in Standby/Suspend mode.	<ul style="list-style-type: none"><li>• Press any key on the keyboard or move the mouse to restore operation.</li><li>• Check the Power Options settings on your computer.</li></ul>	“Understanding power management” on page 2-9

Table 3-2. Troubleshooting

Problem	Possible cause	Suggested action	Reference
The power indicator is amber, but there is no image.	The video signal cable is loose or disconnected from the system or monitor.	Be sure the video cable is connected with the system properly.	“Connecting and turning on your monitor” on page 1-9
	The monitor brightness and contrast are at the lowest setting.	Adjust the brightness and contrast setting on the OSD menu.	“Adjusting your monitor image” on page 2-3
One or more of the pixels appear discolored.	This is a characteristic of the LCD technology and is not an LCD defect.	If there are more than five pixels missing, contact the Support Center.	“Appendix A. Service and Support” on page A-1
<ul style="list-style-type: none"> <li>• Lines or images are blurred in the text.</li> <li>• There are horizontal or vertical lines in images.</li> </ul>	<ul style="list-style-type: none"> <li>• Image setup has not been optimized.</li> <li>• The “Display Properties” settings of your system have not been optimized.</li> </ul>	According to the resolution of the monitor itself, adjust the resolution setting of the system: 1920 × 1080 @ 60 Hz.	“Adjusting your monitor image” on page 2-3
		Perform automatic image setup. If automatic image setup does not help, perform manual image setup.	“Selecting a supported display mode” on page 2-8
		When working in the native resolution, you may find additional improvements by adjusting the Dots Per In. (DPI) setting on your system.	See the Advanced section of your system’s display properties.

## Installing the monitor driver in Windows 10

To use the Plug and Play feature in Microsoft Windows 10, do the following:

1. Turn off the computer, all attached devices.
2. Ensure that the monitor is connected correctly.
3. Turn on the monitor and then the system unit. Allow your computer to start the Windows operating system.
4. From the Lenovo website <https://pcsupport.lenovo.com/solutions/tio flex 24v>, find the corresponding monitor driver and download it to a PC to which this monitor is connected (such as a desktop).
5. Right-click the Windows **Start** button on the desktop, then click **Device Manager**, and double click **Monitor**.
6. Double-click **Generic Monitor**.
7. Click the **Driver** tab.
8. Click **Update Driver**, and then click **Browse Computer to find the driver**.
9. Click **Let me pick from a list of available drivers on my computer**.
10. Click the **Have Disk...** button. By clicking the **Browse** button, browse and point to the following path: **X:\Monitor Drivers\Windows** (where X indicates “the folder in which the downloaded driver is located” (such as a desktop)).
11. Select **TIO Flex 24v.inf** file, Click **Open** button. Click **OK** button.
12. In the new window, select **TIO Flex 24v** and click **Next**.
13. After the installation is complete, delete all downloaded files and close all Windows.
14. Restart the system. The system will automatically select the refresh rate and the corresponding color matching profile.

**Note:** On LCD monitors, unlike CRTs, a faster refresh rate does not improve display quality. Lenovo recommends using either 1920 × 1080 at a refresh rate of 60 Hz, or 640 × 480 at a refresh rate of 60 Hz.

## Installing the monitor driver in Windows 11

To use the Plug and Play feature in Microsoft Windows 11, do the following:

1. Turn off the computer, all attached devices.
2. Ensure that the monitor is connected correctly.
3. Turn on the monitor and then the system unit. Allow your computer to start the Windows operating system.
4. From the Lenovo website <https://pcsupport.lenovo.com/solutions/tio flex 24v>, find the corresponding monitor driver and download it to a PC to which this monitor is connected (such as a desktop).
5. Right-click the Windows **Start** button on the desktop, then click **Device Manager**, and double click **Monitor**.
6. Double-click **Generic Monitor**.
7. Click the **Driver** tab.
8. Click **Update Driver**, and then click **Browse Computer to find the driver**.
9. Click **Let me pick from a list of available drivers on my computer**.
10. Click the **Have Disk...** button. By clicking the **Browse** button, browse and point to the following path: **X:\Monitor Drivers\Windows** (where X indicates “the folder in which the downloaded driver is located” (such as a desktop)).
11. Select **TIO Flex 24v.inf** file, Click **Open** button. Click **OK** button.
12. In the new window, select **TIO Flex 24v** and click **Next**.
13. After the installation is complete, delete all downloaded files and close all Windows.
14. Restart the system. The system will automatically select the refresh rate and the corresponding color matching profile.

**Note:** On LCD monitors, unlike CRTs, a faster refresh rate does not improve display quality. Lenovo recommends using either 1920 × 1080 at a refresh rate of 60 Hz, or 640 × 480 at a refresh rate of 60 Hz.

### Getting further help

If you still can't solve your problem, please contact the Lenovo Support Center. For more information on contacting the Support Center, please see “Appendix A. Service and Support” on page A-1

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## Service information

### Customer responsibilities

The warranty does not apply to a product which has been damaged due to accident, misuse, abuse, improper installation, usage not in accordance with product specifications and instructions, natural or personal disaster, or unauthorized alterations, repairs or modifications.

The following are examples of misuse or abuse and not covered by warranty:

- Images burned onto the screen of a CRT monitor. Burned image is preventable by utilizing a moving screen saver or power management.
- Physical damage to covers, bezel, base and cables.
- Scratches or punctures on monitor screens.

### Service parts

The following parts are for use by Lenovo service, or Lenovo authorized dealers, to support the customer warranty. Parts are for service use only. The table below shows information for model 12BN-MAR3-WW.

Table 3-3. Repair parts list

<b>FRU (FIELD REPLACEABLE UNIT) PART NUMBER</b>	<b>Description</b>	<b>Machine Type/Model (MTM)</b>	<b>Color</b>
5D11J82053	TIO Flex 24v - 23.8 inch FRU Monitor (HDMI)	12BN	Raven Black
5SE0Y56449	TIO Flex Gen1 Stand with cable for Monitor mode,HH	12BN	Raven Black
5SE0Y56450	TIO Flex Gen1 Stand with cable for Monitor mode,GT	12BN	Raven Black

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## Appendix A. Service and Support

The following information describes the technical support that is available for your product, during the warranty period or throughout the life of your product. Refer to the Lenovo Limited Warranty for a full explanation of Lenovo warranty terms.

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### Registering your option

Register to receive product service and support updates, as well as free and discounted computer accessories and content. Go to:  
<http://www.lenovo.com/register>

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### Online technical support

Online technical support is available during the lifetime of a product at:  
<http://www.lenovo.com/support>

Product replacement assistance or exchange of defective components also is available during the warranty period. In addition, if your option is installed in a Lenovo computer, you might be entitled to service at your location. A Lenovo technical support representative can help you determine the best alternative.

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### Telephone technical support

Installation and configuration support through the Customer Support Center will be available until 90 days after the option has been withdrawn from marketing. After that time, the support is cancelled, or made available for a fee, at Lenovo's discretion. Additional support is also available for a nominal fee.

Before contacting a Lenovo technical support representative, please have the following information available: option name and number, proof of purchase, computer manufacturer, model, serial number and manual, the exact wording of any error message, description of the problem, and the hardware and software configuration information for your system.

Your technical support representative might want to walk you through the problem while you are at your computer during the call.

Telephone numbers are subject to change without notice. The most up-to-date telephone list for Lenovo Support is always available at: <http://www.lenovo.com/support/phone>

Country or Region	Telephone Number
Argentina	0800-666-0011 (Spanish, English)
Australia	1-800-041-267 (English)
Austria	0810-100-654 (For local rate) (German)
Belgium	Warranty service and support: 02-339-36-11 (Dutch, French)

Country or Region	Telephone Number
Bolivia	0800-10-0189 (Spanish)
Brazil	Calls made from within the Sao Paulo region: 11-3889-8986 Calls made from outside the Sao Paulo region: 0800-701-4815 (Portuguese)
Brunei Darussalam	Dial 800-1111 (English)
Canada	1-800-565-3344 (English, French)
Chile	800-361-213 (Spanish)
China	Technical Support Line: 400-100-6000 (Mandarin)
China (Hong Kong S.A.R.)	(852) 3516-8977 (Cantonese, English, Mandarin)
China (Macau S.A.R.)	0800-807/(852) 3071-3559 (Cantonese, English, Mandarin)
Colombia	1-800-912-3021 (Spanish)
Costa Rica	0-800-011-1029 (Spanish)
Croatia	385-1-3033-120 (Croatian)
Cyprus	800-92537 (Greek)
Czech Republic	800-353-637 (Czech)
Denmark	Warranty service and support: 7010-5150 (Danish)
Dominican Republic	1-866-434-2080 (Spanish)
Ecuador	1-800-426911-OPCION 4 (Spanish)
Egypt	Primary: 0800-0000-850 Secondary: 0800-0000-744 (Arabic, English)
El Salvador	800-6264 (Spanish)
Estonia	372-66-0-800 (Estonian, Russian, English)
Finland	Warranty service and support: +358-800-1-4260 (Finnish)

Country or Region	Telephone Number
France	Warranty service and support: 0810-631-213 (hardware) (French)
Germany	Warranty service and support: 0800-500-4618 (toll-free) (German)
Greece	Lenovo Business Partner (Greek)
Guatemala	Dial 999-9190, wait for operator, and request to reach 877-404-9661 (Spanish)
Honduras	Dial 800-0123 (Spanish)
Hungary	+36-13-825-716 (English, Hungarian)
India	Primary: 1800-419-4666 (Tata) Secondary: 1800-3000-8465 (Reliance) Email: <a href="mailto:commercialts@lenovo.com">commercialts@lenovo.com</a> (English and Hindi)
Indonesia	1-803-442-425 62 213-002-1090 (Standard Charges Apply) (English, Bahasa Indonesia)
Ireland	Warranty service and support: 01-881-1444 (English)
Israel	Givat Shmuel Service Center: +972-3-531-3900 (Hebrew, English)
Italy	Warranty service and support: +39-800-820094 (Italian)
Japan	0120-000-817 (Japanese, English)
Kazakhstan	77-273-231-427 (Standard Charges Apply) (Russian, English)
Korea	080-513-0880 (Collect call) 02-3483-2829 (Toll Call) (Korean)
Latvia	371-6707-360 (Latvian, Russian, English)
Lithuania	370 5278 6602 (Italian, Russian, English)
Luxembourg	ThinkServer and ThinkStation: 352-360-385-343 ThinkCentre and ThinkPad: 352-360-385-222 (French)
Malaysia	1-800-88-0013 03-7724-8023 (Standard Charges Apply) (English)
Malta	356-21-445-566 (English, Italian, Maltese Arabic)

Country or Region	Telephone Number
Mexico	001-866-434-2080 (Spanish)
Netherlands	020-513-3939 (Dutch)
New Zealand	0508-770-506 (English)
Nicaragua	001-800-220-2282 (Spanish)
Norway	8152-1550 (Norwegian)
Panama	Lenovo Customer Support Center: 001-866-434 (toll-free) (Spanish)
Peru	0-800-50-866 OPCION 2 (Spanish)
Philippines	1-800-8908-6454 (GLOBE subscribers) 1-800-1441-0719 (PLDT subscribers) (Tagalog, English)
Poland	Laptops and tablets branded with logo Think: 48-22-273-9777 ThinkStation and ThinkServer: 48-22-878-6999 (Polish, English)
Portugal	808-225-115 (Standard Charges Apply) (Portuguese)
Romania	4-021-224-4015 (Romanian)
Russia	+7-499-705-6204 +7-495-240-8558 (Standard Charges Apply) (Russian)
Singapore	1-800-415-5529 6818-5315 (Standard Charges Apply) (English, Mandarin, Bahasa Malaysia)
Slovakia	ThinkStation and ThinkServer: 421-2-4954-5555
Slovenia	386-1-2005-60 (Slovenian)
Spain	34-917-147-833 (Spanish)
Sri Lanka	9477-7357-123 (Sumathi Information systems) (English)
Sweden	Warranty service and support: 077-117-1040 (Swedish)
Switzerland	Warranty service and support: 0800-55-54-54 (German, French, Italian)
Taiwan	0800-000-702 (Mandarin)

Country or Region	Telephone Number
Thailand	001-800-4415-734 (+662) 787-3067 (Standard Charges Apply) (Thai, English)
Turkey	444-04-26 (Turkish)
United Kingdom	Standard warranty support: 03705-500-900 (local toll calls) Standard warranty support: 08705-500-900 (English)
US	1-800-426-7378 (English)
Uruguay	000-411-005-6649 (Spanish)
Venezuela	0-800-100-2011 (Spanish)
Vietnam	120-11072 (Toll Free) 84-8-4458-1042 (Standard Charges Apply) (Vietnamese, English)

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## Appendix B. Notices

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

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## Recycling information

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

<http://www.lenovo.com/lenovo/environment/recycling>

環境配慮に関して

本機器またはモニターの回収リサイクルについて

企業のお客様が、本機器が使用済みとなり廃棄される場合は、資源有効利用促進法の規定により、産業廃棄物として、地域を管轄する県知事あるいは、政令市長の許可を持った産業廃棄物処理業者に適正処理を委託する必要があります。また、弊社では資源有効利用促進法に基づき使用済みパソコンの回収および再利用・再資源化を行う「PC 回収リサイクル・サービス」を提供しています。詳細は、[https://www.lenovo.com/jp/ja/services\\_warranty/recycle/pcrecycle/](https://www.lenovo.com/jp/ja/services_warranty/recycle/pcrecycle/)をご参照ください。

また、同法により、家庭で使用済みとなったパソコンのメーカー等による回収再資源化が 2003 年 10 月 1 日よりスタートしました。詳細は、[https://www.lenovo.com/jp/ja/services\\_warranty/recycle/personal/](https://www.lenovo.com/jp/ja/services_warranty/recycle/personal/)をご参照ください。

重金属を含む内部部品の廃棄処理について

本機器のプリント基板等には微量の重金属（鉛など）が使用されています。使用後は適切な処理を行うため、上記「本機器またはモニターの回収リサイクルについて」に従って廃棄してください。

## Collecting and recycling a disused Lenovo computer or monitor

If you are a company employee and need to dispose of a Lenovo computer or monitor that is the property of the company, you must do so in accordance with the Law for Promotion of Effective Utilization of Resources. Computers and monitors are categorized as industrial waste and should be properly disposed of by an industrial waste disposal contractor certified by a local government. In accordance with the Law for Promotion of Effective Utilization of Resources, Lenovo Japan provides, through its PC Collecting and Recycling Services, for the collecting, reuse, and recycling of disused computers and monitors. For details, visit the Lenovo Web site at

[https://www.lenovo.com/jp/ja/services\\_warranty/recycle/pcrecycle/](https://www.lenovo.com/jp/ja/services_warranty/recycle/pcrecycle/). Pursuant to the Law for Promotion of Effective Utilization of Resources, the collecting and recycling of home-used computers and monitors by the manufacturer was begun in October 1, 2003. This service is provided free of charge for home-used computers sold after October 1, 2003. For details, visit the Lenovo Web site at:

[https://www.lenovo.com/jp/ja/services\\_warranty/recycle/personal/](https://www.lenovo.com/jp/ja/services_warranty/recycle/personal/).

## Disposing of Lenovo computer components

Some Lenovo computer products sold in Japan may have components that contain heavy metals or other environmental sensitive substances. To properly dispose of disused components, such as a printed circuit board or drive, use the methods described above for collecting and recycling a disused computer or monitor.

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ThinkPad

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Microsoft, Windows, and Windows NT are trademarks of the Microsoft group of companies.

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## Power cords and power adapters

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

Do not use the ac power cord for other devices.