

The quickest way to check if your laptop supports an M.2 SSD.

Learn how to check if your laptop supports M.2 SSDs before upgrading. A simple guide to distinguishing between NVMe and SATA standards will help you choose the right component.

A slow laptop might make upgrading to an SSD to optimize its speed. However, M.2 slots come in many different standards, and buying the wrong one can lead to incompatibility and wasted money. This article will provide detailed instructions on how to identify the correct SSD standard for your laptop, helping you choose the right component and upgrade effectively.

Key points

1. M.2 SSDs come in two main types: SATA, with a speed limit of approximately 550MB/s, and NVMe, which uses PCIe for superior high performance.
2. You can check if your laptop supports M.2 via the model number, the manufacturer's website, software, or by turning on the laptop directly.
3. It's important to identify the correct slot type (SATA/NVMe, PCIe Gen) to avoid buying the wrong one and wasting money.
4. When upgrading, pay attention to storage capacity limits, cooling, and choose genuine components to ensure long-term stability.

1. Understanding M.2 SSDs and differentiating between M.2 SATA and M.2 NVMe

1.1. What is an M.2 SATA SSD?

M.2 SATA SSDs are solid-state data storage devices that utilize the compact M.2 physical size. This type of drive uses the characteristic B+M Key connector with two notches on the contact pins. A limitation is that the device still uses the older SATA III interface, limiting data read/write speeds to a maximum of approximately 550MB/s.



M.2 SATA SSDs have speed limitations.

1.2. What is an M.2 NVMe SSD?

M.2 NVMe SSDs are a standard SSD that uses the NVMe protocol and connects directly via PCIe, easily identifiable by its single-slot M Key connector. Thanks to their high bandwidth, speeds reach approximately 3000MB/s in Gen 3 and over 7000MB/s in Gen 4. Notably, PCIe Gen 5 can achieve speeds of 10,000-14,000MB/s, effectively handling demanding tasks.

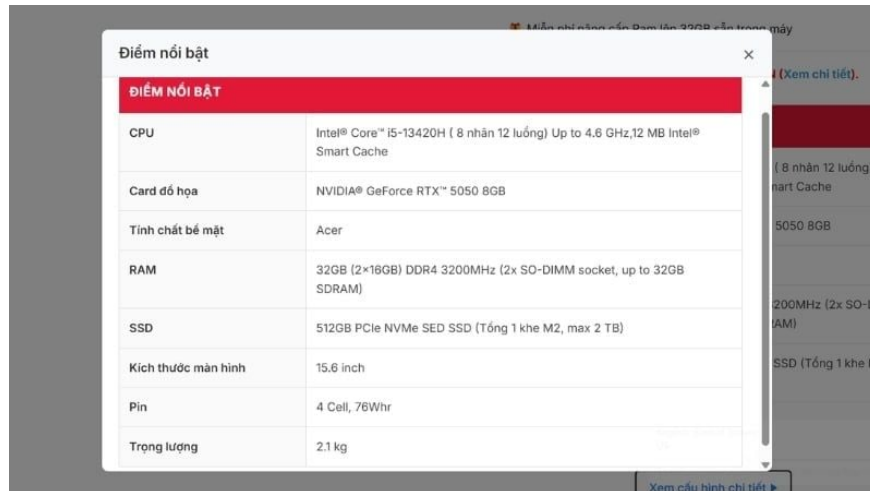


M.2 NVMe SSDs deliver superior speed.

2. How to check if your laptop supports M.2 SSDs

2.1. Check the configuration information at the place where you purchased the product.

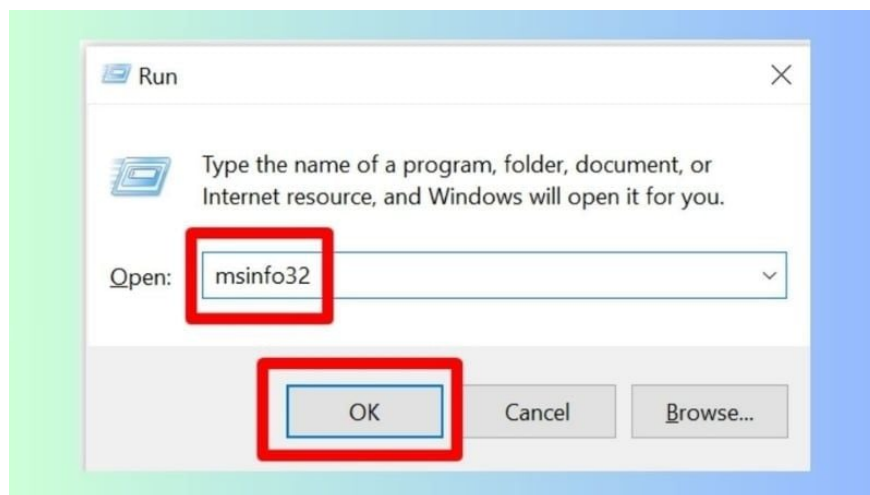
The simplest way to check if your laptop's SSD is to visit the manufacturer's official website or search for your laptop's model number on Google. The specifications usually clearly state whether the machine supports M.2 SSDs.



Check the Specifications section.

2.2. Checking technical specifications through the machine code

1. **Step 1:** Press the **Windows + R** key combination to open the **Run** dialog box . Type the command **msinfo32** and press **Enter** to open the **Windows System Information** tool .



Enter the command msinfo32 and press Enter.

1. **Step 2:** In the software interface, find the **System Model** line to record the correct computer model code. Access the laptop manufacturer's homepage , enter the **System Model** code into the search bar, and check the computer's hardware under **Storage** or **Hard Drive** to see the supported specifications.

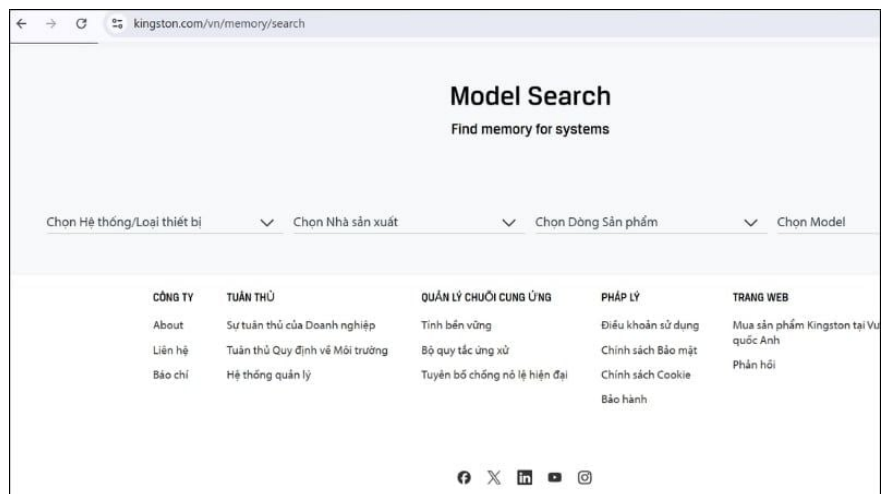
System Manufacturer	Micro-Star International
System Model	Modern 14 B11MOU
System Type	x64-based PC
System SKU	14D3.B
Processor	11th Gen Intel(R) Core(TM)
BIOS Version/Date	American Megatrends In
SMBIOS Version	3.3
Embedded Controller Version	255.255
BIOS Mode	UEFI

Find the System Model line to record the correct computer code.

2.3. Use testing tools from the manufacturer.

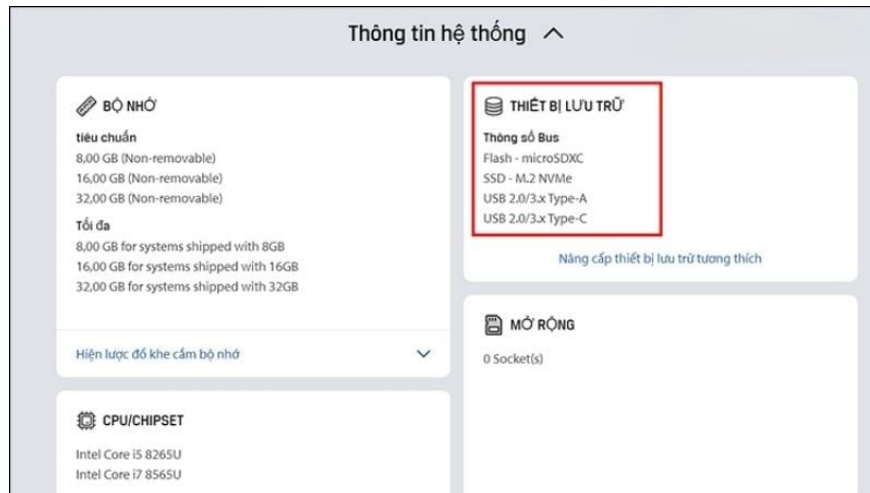
Many major memory manufacturers, such as Kingston and Crucial, offer online tools to help you check your laptop's compatibility. Simply enter the manufacturer, model, and specific model number, and the tool will return the results.

1. **Step 1:** Access **Kingston 's website** [HERE](#) , then fill in your device information using Kingston's tool.



Enter the device information into the Kingston tool.

1. **Step 2:** Read the results in the **Storage Devices** section to find out if your computer supports M.2 SATA or NVMe.



The machine's details will be displayed in a new window.

2.4. Open the bottom of the laptop to inspect the motherboard.

Warning: Removing the bottom cover should only be done after the warranty has expired and you have sufficient experience with hardware.

Users will need a specialized screwdriver to open the back cover of the computer. After opening it, carefully examine the motherboard to locate the M.2 connector. These slots are usually labeled PCIe, NVMe, or SATA directly on the motherboard for easy identification.



Examine the motherboard to identify the M.2 slot.

3. Things to note before purchasing an M.2 SSD upgrade.

1. **Check PCIe bandwidth generation:** You need to check the PCIe standard of your motherboard to avoid wasting performance. If your machine only supports Gen 3, Gen 4 SSDs will also have limited speeds.

This creates a bottleneck and prevents you from utilizing the drive's true potential.

2. **Motherboard maximum capacity limit:** Some older laptops have SSD capacity limitations due to BIOS settings, often only recognizing a maximum of 512GB or 1TB. If you buy a larger drive, the system may not recognize it fully. Therefore, you need to carefully check the specifications before upgrading.
3. **Heat dissipation issues in laptop spaces:** Laptops have limited space, making them unsuitable for SSDs with large heatsinks. Thick heatsinks can cause interference, bend the casing, or damage internal components. It's best to choose a thin SSD that fits the laptop's design to ensure safety.



It's advisable to choose a thin SSD that fits the computer's design to ensure safety.

4. Buy genuine and high-quality SSDs at GearVN.

GearVN specializes in providing high-end PCs, laptops, PC components (RAM, CPU, SSD, etc.), and gaming equipment (monitors , headphones, keyboards, mice, etc.) to meet all the needs of gamers and technology users. In particular, GearVN stands out with advantages such as:

1. **Diverse products and optimized configurations:** GearVN offers countless options from major brands such as Samsung, Kingston, TeamGroup, Gigabyte, Corsair, etc. All products are carefully selected.
2. **Competitive pricing and numerous promotions:** GearVN regularly runs attractive promotions and discounts on special occasions. You can easily own your desired components at the best prices, along with attractive gifts or flexible installment payment options.
3. **Reliable warranty and after-sales service policy:** When shopping at GearVN, you can rest assured with our clear warranty policy and dedicated technical support team. Our experienced specialists are always ready to advise you on choosing the right product and answer any questions you may have during use.
4. **Convenient shopping experience:** Whether you want to experience our products in person at our showrooms or shop online through our website with fast delivery service, GearVN offers maximum convenience.

GearVN contact information :

1. **Website :** gearvn.com

2. **Hotline** : 1900.5301



Buy genuine and high-quality SSDs at GearVN.

5. Some related questions

5.1. Can an M.2 SSD be installed in a used laptop?

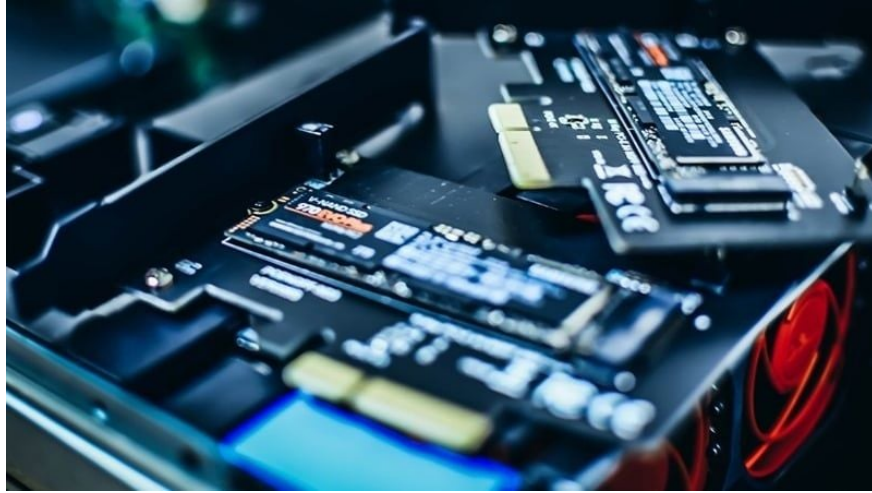
This capability depends entirely on the year of manufacture and motherboard design of each model. Many mainstream laptop models manufactured before 2015-2016 often only have a 2.5-inch SATA slot and may not have an M.2 slot.

5.2. Is it possible to plug an M.2 SATA SSD into an M.2 NVMe slot?

Most modern laptop motherboards support backward compatibility, allowing you to plug and use an M.2 SATA drive in an NVMe slot. However, the reverse is not possible because the standard SATA slot does not recognize the PCIe protocol of the NVMe drive.

5.3. Will upgrading to an SSD void my laptop warranty?

Attempting to remove the screws yourself, thereby tearing the seal on the bottom of the device, will result in the manufacturer refusing to provide warranty service. To ensure safety and protect your rights, you should take your device to an authorized dealer or professional service center for assistance.



You should take your device to an authorized dealer.

See more:

1. The simplest and most accurate way to check if your hard drive is an SSD or HDD.
2. How to choose the right SSD for your laptop to effectively speed up your machine.
3. How to identify SATA and NVMe SSD standards directly on Windows 10

Checking if your laptop supports M.2 SSDs before upgrading is a mandatory step to ensure you buy the right component, avoid waste, and optimize device performance. If you have difficulty determining hardware specifications, contact GearVN immediately for advice and support to upgrade your hard drive safely and accurately.

You finished reading the article "**The quickest way to check if your laptop supports an M.2 SSD.**" edited by the [TipsMake](#) team. We hope this article has provided you with many useful tech tips and tricks. You can search for similar articles on tips and guides. Thank you for reading and for following us regularly.