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[Windows 11/10] Troubleshooting - Failure to Detect Graphics Card Applicable Products: Notebook, Desktop, All-in-One PC, Gaming HandheldShould you encounter a scenario wherein your system fails to detect the graphics card, such as when the graphics card is absent in the Device Manager or only displays the Microsoft Basic Display Adapter, kindly refer to the ensuing common troubleshooting methods. Inspect the Settings in Armoury CrateFor users employing gaming laptops or desktop computers, it is advisable to inspect the graphics card mode settings within the Armoury Crate application (Armoury Crate > Device > GPU Power Saving > GPU Mode).When “Eco Mode” is applied, independent graphics card information will not be discernible within Device Manager. It is recommended that you opt for “Standard” to ascertain the detection of the graphics card. Further information is available in this article: Armoury Crate Introduction.Should your device not feature this particular configuration, or if you have already configured it for “Standard” mode, please proceed with the subsequent troubleshooting methods.Update BIOS, Windows updates, and driversSoftware updates often improve system stability and optimization, so it's recommended to regularly check for the latest versions for your device. Learn more about how to update BIOS:How to update the BIOS version in Windows systemHow to use EZ Flash to update the BIOS version(For desktop products, please refer to ASUS Motherboard EZ Flash 3 Introduction.)For executing Windows update and drivers update, here you can learn more about:How to execute Windows UpdateHow to update drivers via System Update in MyASUSPerform CMOS Reset/Hard ResetRemove the power adapter and perform a CMOS clear to reset the hardware to default settings. You can refer to relevant articles for instructions on how to clear the CMOS:Note: For notebook models TP420IA and UX425IA, do not remove the power adapter; perform CMOS clear with the adapter connected. If you're unsure about your computer's exact model, refer to this article: How to find your computer model.Perform BIOS RestorationAttempt to revert the BIOS settings to their default values. You can reference relevant articles to understand how to restore BIOS settings:After restoring the BIOS to its default state, if the graphics card remains undetected within the BIOS settings screen, it is likely a hardware issue. We recommend seeking an assessment at an ASUS-authorized service center.Note: The screens below may exhibit variations due to product models or BIOS versions.Scan for Hardware Changes in Device ManagerType and search [Device Manager]① in the Windows search bar, then click [Open]②. After opening Device Manager, click [Action]③ at the top and select [Scan for hardware changes]④. After the system scans for hardware changes, it might recognize the graphics card device that is connected so that you can use the device. Uninstall Graphics Card Drivers and ReinstallVisit the ASUS official website or download the latest graphics card drivers through MyASUS. If you are uncertain about how to download your graphics card drivers, please refer to this article: How to Search for and Download Drivers.Upon completing the download, kindly remove the pre-existing graphics card drivers from your device. Type and search [Control Panel]① in the Windows search bar, then click [Open]②. After launching the Control Panel, within the Programs category, select [Uninstall a Program]③. Within the Programs and Features window, select your graphics card driver⑤, and then click [Uninstall/Change]⑥, following the on-screen prompts for uninstallation. Note: If your graphics card comprises multiple drivers, we recommend uninstalling all relevant drivers for a more comprehensive removal. After the uninstallation is finalized, kindly restart your device and proceed to install the graphics card drivers provided by ASUS. Here you can learn more about How to install drivers.Use System Restore to Restore the SystemIf the issue started recently and you have previously created a system restore point or if the system has created an automatic restore point, you can try restoring the system to a point in time before the issue occurred. Learn more about How to restore the system from a created system restore point.Perform a Windows System RestoreIf all troubleshooting steps have been completed but the issue persists, back up your personal files and perform a system restore to return your device to its original configuration. Learn more: How to Restore (Reinstall) the System.If your issue remains unresolved, please contact ASUS Customer Service for further assistance. Last Update : 2025/06/04 09:26 Above information might be partly or entirely quoted from exterior websites or sources. please refer to the information based on the source that we noted. Please directly contact or inquire the sources if there is any further question and note that ASUS is neither relevant nor responsible for its content/serviceThis information may not suitable for all the products from the same category/series. Some of the screen shots and operations could be different from the software versions.ASUS provides the above information for reference only. If you have any questions about the content, please contact the above product vendor directly. Please note that ASUS is not responsible for the content or service provided by the above product vendor.Brand and product names mentioned are trademarks of their respective companies. Picture this: you just downloaded and installed an awesome new game, you open it up, hop on the first mission, and you notice something is wrong. You have a very powerful GPU, and this game shouldn’t be an issue for it at all. Well, the answer is straightforward: you are using the wrong GPU. This article will show you how to get your laptop to use the discrete GPU instead of the low-power integrated graphics. It might seem obvious at first, that you have abnormally low in-game FPS, but this isn’t the only way to know if your primary GPU is not utilized. The way to check first is simple: Press and hold CTRL +ALT + DELETE and select Task Manager.Click on the Performance tab and look at the GPU section. Suppose you notice that even though your game is clearly running, the usage of your dedicated GPU remains near 0 while your CPU/ APU is under heavy load. In that case, this is a clear sign that your main GPU isn’t utilized at all. This is an important distinction since low in-game FPS can have multiple underlying causes, not just that your laptop is using the wrong GPU. While these steps are designed for laptops, most of the fixes can also be applied to a desktop PC in case it has an integrated graphics solution. There are several ways to do this. But, we will learn how it is done with the built-in Windows settings. Click on the Windows Start Menu Click on PC settings and click on System Find and click the Display tabScroll down until you see the option called “Graphics settings” and click itChoose the app from the drop-down menu that you wish to be run with your discrete GPUIf the application is non-Microsoft, click on “Desktop app” and click the “Browse” buttonLocate the .exe file of the game or application you wish to run with your primary GPUOnce its selected, please click on the “Add” button underneathAfter this, click on “Options”You will see a new menu pop up that lets you choose the default GPU used to run this applicationYour main GPU will be listed under the “High Performance” option with its brand and model name below.Tick the round box with your primary GPU and click on Save to apply the changes Restart your app and check if the proper GPU is being used now. If you did everything right, you should immediately notice that in your Task Manager, the primary GPU is now put under load when running the game or app. This is another way of forcing the app to run with the discrete NVIDIA GPU. This solution works only for NVIDIA-powered laptops. Right-click anywhere on your desktop and click on NVIDIA Control PanelClick on “Manage 3D settings” on the left side of the menu under 3D Settings.Click “Program Settings” and select the app you wish to run with a discrete GPU from the “Select a program to customize” menu.Click on the Preferred graphics processor tab, select the high-performance NVIDIA GPU to be used as default and then apply these changes. Games should automatically default to using your most powerful GPU. Since this is controlled mainly by the laptop drivers, having outdated drivers can cause your System to choose the wrong GPU. Here is a detailed guide on updating your GPU drivers in windows. Click on the Windows Start MenuIn the search bar, type the words “Device Manager” and click on the application that comes upYou will see a menu pop up with various devices underneath; look for the “Display Adapter” tab and click on the arrow next to its name (this is where your GPUs will be listed)Right-click on NVIDIA GPUs name and click on “Update Driver” Another great way to keep all your NVIDIA or AMD drivers up to date is by installing either the NVIDIA GeForce Experience app or AMD’s equivalent. If you want a full guide on how to properly update all of your laptop’s drivers, including more advanced ones like the chipset drivers, we have a complete guide on how to do so here. All laptops come with different modes for battery settings. Some of these modes force your hardware to run with low performance to preserve battery. Open up your Windows Start MenuClick on the tab on the side called “Control Panel”Click on System and Security and then find “Power Options” and click itYou will see a couple of options to select fromSelect the “High Performance” one and apply the changes This method could fix your laptop always using the integrated low-performance GPU due to a conditional battery constraint. This general troubleshooting step can also fix the issue with your PC defaulting to the wrong GPU. Here’s how you can update your Windows: Click on the Windows Start Panel and click on SettingsClick on Update & Security and then click on Windows UpdateSelect the “Check for updates” option and let then install any pending updates and restart your PC This fix could work great since laptops come with slightly different software depending on the manufacturer’s brand. Sometimes you have to access the advanced BIOS settings in order to get your laptop to recognize and start using your discrete GPU. Please note that depending on your laptop manufacturer, the exact steps for how to access this feature might vary. But the general steps to turn the GPU on can be followed, regardless. Here is how to do so: Restart your laptop and hit the BIOS prompt key (most common f10, f4 or f12)Once you are in your BIOS menu, look for a panel or menu option called “Advanced”Locate the option “dedicated GPU in bios” and open itFind the submenu that says: Graphics and then choose “Discrete Graphics” Apply the changes and click save, then exit your BIOS, restart and check if the discrete GPU is properly being recognized. Updating your BIOS should be done as a last resort if the prior steps didn’t work. Before attempting to flash any new BIOS version, it’s paramount that you create backups for all your important files, as an incorrect BIOS flash can prevent your PC from functioning and corrupt system files. Even though this fix is not advised, we have a comprehensive guide on how to update BIOS. Performing a BIOS update, when done correctly carries a lower risk and is a solution for many other PC-related issues. Graphics card not detected? Nobody likes seeing an error like this, especially if you aren’t particularly knowledgeable in hardware/software interaction details. Don’t worry, we’re here to assist. There are several potential reasons why your GPU isn’t being detected, and you might encounter this error in various places, which only adds to the confusion. I’m prepared to make the requested modifications. Please provide the text you’d like me to edit. It would be a shame if your PC build looked like this but was unable to detect your GPU This problem can occur for several reasons, but it’s exceedingly annoying when Windows automatically switches to the integrated GPU without you noticing it until you try to play a game. Admittedly, this shouldn’t happen very often, but it illustrates the point. It can also happen for seemingly arbitrary reasons, but the truth is that there’s an explanation for everything that happens on your PC, and this is no exception. If you’re playing a particularly demanding game, your GPU could overheat and temporarily shut down. Sometimes, it doesn’t come back online and leaves you staring at a black screen. Fortunately, the bulk of modern CPUs (excluding Ryzen) come with an integrated graphics card. You can simply switch your monitor to that output (which you can find on your motherboard’s backplate, contiguous to every other device input such as USB or PS/2). This way, you can troubleshoot the issue “from the inside.” At that point, your initial step should be to go to Device Manager, find your GPU, and check if it’s disabled. You can also select ‘Enable device’ by clicking on your GPU to tackle the issue. The text will show “Enable device” if the GPU is disabled Unfortunately, it’s also possible that the Device Manager won’t even recognize your separate GPU and will instead only show the properties of the integrated one. In that case, you’ll need to check the BIOS/UEFI, but we’ll get to that later. Sometimes the ‘Graphics card not detected’ error will occur upon the installation of novel drivers if something goes wrong. This could be a faulty driver or the new drivers’ incompatibility with another component inside the PC; the options are too numerous to list. It might be slightly unjust to claim that these errors are purely the fault of the manufacturer. In many cases, the user makes a mistake by downloading the wrong driver. If that happens, you should carefully examine your GPU model and download the correct driver after removing the mistakenly installed one. It is vital to use the appropriate driver installation guide for either AMD or NVIDIA GPUs, as the installation process differs between the two. However, as GPU technology improves, manufacturers are beginning to prefer the method of having GPU management software installed automatically when a new card is inserted. This software then assumes responsibility for updating drivers. This issue can also occur after a Windows update. By checking related forums and communities, the only solution is to roll back the update and not install it until you are certain this problem no longer persists. You can also reinstall the update and see if you get a favorable result or need to roll back the update again. Accessing the BIOS/UEFI settings is easy in Windows 10 UEFI is a successor to BIOS. However, due to how BIOS was ingrained into our minds, it’s still commonly used, although it now refers to UEFI rather than BIOS. We will refer to UEFI as BIOS to avoid any unnecessary confusion. BIOS is in charge of your hardware, and it should be the first logical step in determining whether your GPU is disconnected. If your monitor doesn’t detect the GPU and only shows a black screen, you can use the integrated GPU to access BIOS. If you’re lucky, the BIOS will identify your separate GPU, and you can easily activate it by modifying its status from disabled. If your GPU is not recognized by the BIOS and shows an empty PCIe slot, you have a more significant problem. Don’t worry. For every PC dilemma, there’s a solution. Keep in mind, various motherboard manufacturers have distinct BIOS. The solution to this BIOS problem will differ from one motherboard to another. If you can’t seem to find an option to enable the GPU, refer to the motherboard’s manual. Before we resort to opening your case, it’s good to check if your BIOS is up to date. This is an intricate operation, so it’s best to follow the instructions from your motherboard’s manufacturer carefully. Even if it is up to date, getting your BIOS reflashed may fix the issue. Removing PC case panels is usually easy. Photo credit: Gamers Nexus Now we’re getting down and nitty. Opening the case can be a daunting task if you’ve never done it but don’t fret, it’s not that complicated. First, you need to check that the power cables are properly plugged into the GPU. Even if they are, due to insufficient cable management (no judgment here), they may be bent at an odd angle, making them lose contact. You should then check that your graphics card is properly positioned in the PCIe x16 lane. A good way to tell if it’s correctly seated is if the back I/O panel is sitting securely on the back of the case. If it isn’t and there’s a gap between the GPU’s rear panel and the case, try gently applying a bit of pressure on the GPU down towards the motherboard. If the GPU wasn’t inserted properly before, you should be able to hear a “click” sound. This means the GPU is now precisely positioned. There’s also the traditional approach of turning it off and on again, which requires you to fully remove the GPU and then put it back, though this is unlikely to solve the issue. You should also check if your PSU has adequate power to handle your GPU’s maximum demands. As a general rule, the GPU’s base power use is at approximately 40% of your PSU’s power capability, allowing it to use 50% of the available power when executing intricate operations. From here on, things only get grimmer. If you still haven’t been able to pinpoint the issue, your sole alternative is to remove the GPU and test it on a different PC that you are certain functions. If the GPU operates there, there is likely a problem with other hardware in your system. It could be your motherboard, RAM, PSU, or even CPU. The simplest solution here is to replace the faulty hardware, and that’s a whole other headache. If your GPU doesn’t work in the other PC either, then you can only hope your warranty covers whatever damage has occurred, or you’ll have to repair it at your own expense. Alternatively, it might be time to search for a new graphics card. Hello, I’m having trouble with the GPU on my ASUS TUF Gaming A15 FA506IHRB – it's not being detected. I got this laptop just about a year ago, and it worked fine until recently. I noticed my computer getting slower, especially when I'm gaming.I checked NVIDIA GeForce Experience, and it says, ''No NVIDIA GPU is detected in my system.'' At first, I thought it might be a GeForce Experience issue, but after watching a tutorial, I realized the problem is with Device Manager. It only detects my other AMD Radeon GPU.I've watched lots of tutorials with similar solutions, but none of them work for me. I tried resetting my computer in different ways, but it still doesn't fix this issue. I even tried upgrading to Windows 11 Pro, but that doesn't fix it either.I tried contacting NVIDIA customer support, and they basically told me to do the same things as in the tutorials. When that didn't work, they told me to contact ASUS customer support, which I did. They told me that my system wasn't compatible with Windows 11 Pro and said that I should reinstall Windows 11 Home, which I did. But still, that doesn't solve this issue. I tried contacting them again, but now they don't respond to me.My GPU is a NVIDIA GTX 1650Is there anyone here who knows how I should solve this or how I should get in contact with ASUS customer support?Thanks in advance. Reddit and its partners use cookies and similar technologies to provide you with a better experience. By accepting all cookies, you agree to our use of cookies to deliver and maintain our services and site, improve the quality of Reddit, personalize Reddit content and advertising, and measure the effectiveness of advertising. 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