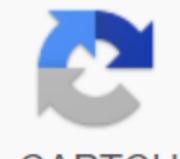


I'm not a robot 
reCAPTCHA

Continue

Hardware components of a computer and their functions pdf

Finding that your computer has a hardware problem is only the first step. If you're solving a hardware problem instead of a software problem, the next step is to determine what hardware problem you're actually having. If you purchased a laptop or a pre-designed desktop computer and still have a warranty, you don't have to worry about this. Do the manufacturer fix the computer for you - understand that this is their problem. If you have created your own computer or want to repair a computer that is not covered by the warranty, this is something you will have to do yourself. Blue Screen 101: Find error message RELATED: Everything you need to know about Blue Screen of Death This may seem like an obvious tip, but searching for information about the blue screen error message can help off-road. Most of the blue death screens you'll encounter in modern versions of Windows are likely to cause hardware failures. The blue death screen often displays information about the crash driver or the type of error detected. For example, suppose you encounter a blue screen that specified NV4_disp.dll as the driver that caused the blue screen. A quick Google search will show that this is the driver of nvidia graphics cards, so now you have somewhere to start. Your graphics card may not be able to work if you encounter the following error message. Check hard drive SMART Status RELATED: How to see if your hard drive dies with the S.M.A.R.T. Hard Drives have built in the S.M.A.R.T. (Self-Control, Analysis and Reporting Technologies) feature. The idea is that the hard drive monitors itself and will notice if it starts to fail if you pre-notify before the disk fails completely. It's not perfect, so your hard drive may fail, even if SMART says everything is fine. If you see a SMART error message, your hard disk fails. Smart Analytics tools let you view smart health status information that your hard drives report. Check your RAM ram failure can cause various problems. If your computer saves data to RAM and RAM returns different data because it's not working properly, it's possible that the program crashes, blue screens, and file system crashes. Use the Windows Built-in Memory Diagnostics Tool to check memory and see if it is working properly. The Memory Diagnostics tool will write data to each of your RAM sectors and then read it to ensure that all RAM works properly. Check the heat levels How hot is on your computer? Overheating can open up on blue screens, crashes, and shut down abruptly. The computer can overheat because you are in a very hot place, poorly ventilated, the fan stopped inside the computer or full of dust. Your computer monitors your internal temperature and you can access this information. It is usually available in the BIOS of the computer, but you also view it with system information utilities such as SpeedFan or Speccy. Check your computer's computer temperature level and ensure that it is within the appropriate range. If your computer overheats, you can only see problems when you're doing something complicated, such as playing a game that emphasizes your CPU and graphics card. Be sure to watch how hot your computer gets when it performs these complex tasks, not just when it's not in use. Stress tests Your processor You can use as a Prime95 tool to check your CPU. Such a tool will advance your computer's CPU to perform calculations without allowing it to rest, work hard and generate heat. If your processor gets too hot, you will start to see errors or system failures. Overclockers use prime95 highlight to test their overclock settings - if Prime95 experiences errors, they throttle back into their overclock to ensure the CPU runs cooler and more stable. This is a good way to check if your processor is stable under load. Stress tests Your graphics card Your graphics card can also be tested under stress. For example, if your graphics manager crashes while playing games, the games themselves crash, or you see an odd graphical failure, you can run a graphics benchmark, such as 3DMark. The benchmark will overscore your graphics card and, if it overheats or if it is overloaded, you'll see graphical problems, crashes, or blue screens as you run the benchmark. If the benchmark looks good, but you have trouble playing a certain game, it can only be a problem with that game. Swap it off every hardware problem is easy to diagnose. If you have a bad motherboard or power source, their problems can only occasionally cause odd problems with other components. It's hard to tell if these components cause problems unless you completely replace them. Finally, the best way to determine whether a component is wrong is to swap it. For example, if you think a graphics card might cause your computer to have a blue screen, remove the graphics card from your computer and swap it for a new graphics card. If everything works well, it's likely that your previous graphics card was bad. It's not easy for people who don't have components sitting around, but it's an ideal way to troubleshoot. Troubleshooting is about testing and errors, and changing components allows you to pin which component actually causes the problem during the removal process. This is not a complete guide to everything that can go wrong and how to identify it - someone could write a whole tutorial on how to fix if the components and still do not cover everything. However, the above tips should give you a few places to start solving more common problems. Image Credit: Justin Marty on Flickr TechRadar supports his audience. When you buy through links to our site, we can earn affiliate commissions. Learn more TechRadar news Sign up to receive news, reviews, analysis and more, plus the hottest technology deals! Thank you for signing up for TechRadar. You will be confirmation email. There was a problem. Refresh the page and try again. No junk, we promise. You can unsubscribe at any time and we will never dilute your data without your permission. Are you wondering what is on your computer? Browse through these hardware photos on your computer and get to know your computer, from RAM to hard drives and everything between them. Motherboards link everything on your computer together. I wonder what all these parts are on your motherboard? View the selected picture on the next page. Typical motherboard contains areas of computer memory, CPU, AGP, PCI and more. See the slots near the motherboard on the next page. Computer equipment, such as memory, PCI and AGP, connects to the motherboard through sockets. Have you ever seen a plate bridge? See the next page. A set of chips is a glue that connects the microprocessor with the rest of the plate, leading to the rest of the computer. On the computer it consists of two main parts - the northern bridge and the southern bridge. Look at the computer memory next. Computer memory has a significant impact on system performance. In the photo above is simm memory, or one in-line memory module, which is the type of RAM memory module. See DIMM memory on the next page. The DIMM, or dual in-line memory module, has a 64-bit path to memory chips, while the SIMM has only 32 bits. Other types of memory are often found in notebooks, printers, and network equipment. SODIMM, or small contour dual in-line memory module, is made with integrated circuits and is approximately half the size of DIMM modules. Find out where RAM is on your desktop computer. Ram upgrade can greatly prolong your computer's life. Another picture is the type of memory that your computer uses when you start. The main input and output system in the BIOS is the first thing you see when you turn on your computer. The BIOS provides important instructions for your computer's hardware on the next page. The microprocessor - also known as a cpu or central processor - is a full computing engine that is made on a single chip. See the high-performance processor on the next page that was originally used on supercomputers. 64-bit processors have entered mainstream, such as this eight-fold Athlon processor. However, you need a hard disk on the next page to store all the information that is processed on your computer. The hard drive is a sealed aluminum box that was opened in this photo. The electronics of the controller are attached to one side, controlling the reading and writing mechanism and the engine that rotates the plates. See close proximity to the disc and plate next to. This hard drive has three plates, also called hard drives, and six read/write heads. Learn how your hard disk reads on the next page. Hands on the hard drive must read / write manuals and must be incredibly fast and accurate, one hand behind the reading/writing head, and all of them are lined up to one unit. Find out who connects your hard disk to your computer Picture. The built-in disk electronics interface is the most popular way to connect your hard disk to your computer. View the drive that connects peripherals. The Peripheral Component Interconnection (PCI) bus provides direct access to the system memory of connected devices. PCI slots can be used for network, graphics, and sound cards. View your PCI card on the next page. PCI cards use 47 pins to add to the PCI slot. Pins are thin metal legs that allow you to attach computer chips to the plate. Another piece of hardware to replace the PCI as a standard way to connect a graphics card. AGP, or accelerated graphics port, allows the operating system to assign RAM to use a graphics card (as above) to fly. Take a closer look at the graphics card on the next page. As a motherboard, the graphics card is a printed card that has a home processor and RAM. If you are a computer game, you probably want this next piece of hardware. PCI Express or PCIe eliminates the need for AGP by making more data and providing more power to video cards. However, in the next picture the item was replaced by PCIe as a new standard. Almost any computer you buy today has universal serial bus connections, so you can attach everything from mice to printers. Learn how computers work to learn more. This computer power source has been removed from the computer body. Small, red switch on the right, above the power cord connector, designed to change the voltage of the line in different countries. See the next interior of the power supply. PC power supplies use switch technology to lower AC input to lower DC voltage. 3.3 and 5 volts typically use digital circuits, while 12 volts are used to run motors on discs and fans. See power transformers nearby. In this photo in the center you can see three small transformers (yellow). To the left are two cylindrical capacitors. Large pieces of aluminium are heat sinks. Take a closer look at the heat sink next to it. Here you can see the heat sink and fan laptop, similar to desktop hardware. See how computers work to learn more. More.

