

OrCAD / Allegro Hardware and Software Requirements 17.2

Cadence PCB products (OrCAD, Allegro, Silicon-Package-Board (SPB)) are integrated directly with Windows, hardware and peripherals supported by Windows are also supported by the Cadence PCB products. A list of hardware and peripherals officially supported by Windows can be obtained from the Microsoft web page.

Note: Once you install 17.2, you should only use the 17.2 version of the switchversion program to change releases. The installer always places this program at the top level of the Cadence hierarchy in the Windows start menu.

64-Bit Requirement

As of 17.2-2016, Cadence Allegro and OrCAD (Including EDM) tools require 64-bit operating systems. This includes the Allegro Free Viewer program. 32-bit operating system versions are no longer supported.

Operating System

Microsoft® Windows® 7 Professional, Enterprise, Ultimate or Home Premium (64-bit); Windows 8 (64-bit)(All Service Packs); Windows 10 (64-bit); Windows 2008 Server R2; Windows 2012 Server (All Service Packs).

Note: Cadence Allegro and OrCAD (Including EDM) products do not support Windows 7 Starter and Home Basic. In addition, Windows Server support does not include support for Windows Remote Desktop. Windows RT and Tablets are not supported.

Recommended Software

- Microsoft® Internet Explorer® 11.0 or later

Minimum Hardware

- Intel® Pentium® 4 or AMD Athlon XP 2000 with multi-core
- CPU
- 8 GB RAM
- Virtual memory at least twice physical memory
- 50 GB free disk space
- 1,024 x 768 display resolution with true color (16bit color)
- Broadband Internet connection for some service
- Ethernet card (for network communications and security hostID)
- Three-button Microsoft-compatible mouse

Recommended Hardware

- Intel® Core™ 2 Duo 2.66 GHz or AMD Athlon 64 X2 5200+
- Note: Faster processors are preferred.
- 24 GB RAM
- 500 GB free disk space
- 1,280 x 1024 display resolution with true color (at least 32bit color)
- A dedicated graphics card
- Dual monitors (For physical design)
- Broadband Internet connection for some services

Graphics Requirements for Physical Design Products

Most physical design products (such as Allegro PCB Editor, APD, SiP, and SI, but not Allegro PCB Router or SigXplorer) offer enhanced graphics via OpenGL. Schematic editors or frontend programs do not require OpenGL.

To use OpenGL as a graphics drawing option, your system must meet the following requirements:

- A modern computer purchased within the last couple of years.
- A dedicated graphics card (motherboard-based) with hardware OpenGL support or an Intel 945 class graphics card. A minimum of 128 MB dedicated (not shared) video RAM and a 128-bit bus interface (256 MB or more is recommended). We also recommend that the card be workstation certified. A high-end motherboard based graphics solution delivers acceptable performance for most designs. This is one area where spending a bit for quality improves productivity.
- A minimum of 1 GB system memory.
- Installation of the latest graphics patches from the graphics card vendor.

Important:

As with most graphics support, you must ensure that the appropriate drivers are installed and properly configured on your system. If you use older versions, you may see glitches with the display of objects, poor performance, and other problems. Make sure that video cards for Linux have Linux drivers available.

Remote graphics are not supported. Examples include:

- Windows terminal services such as Citrix
 - VNC based programs
 - Remote X programs (for example: Hummingbird)
 - Thin client solutions
- If using Remote X clients they need to support OpenGL.

All tools require at least 65000 colors. We no longer support 256- color mode (also known as 8-plane mode in the X window world). Linux X servers must be configured to use the TrueColor model.

Only the 2D mode is supported. OpenGL requires higher level graphics cards for best performance.

OpenGL is enabled by default. You can disable it using the environment variable `disable_opengl` in the OpenGL category of the User Preferences Editor dialog box.

Planning Hardware Purchases for Physical Design Products

The Allegro and OrCAD (Including EDM) product family includes products, such as for schematic capture and library design. These place higher demands on disk access and do not tend to need the fastest CPU available. However, most OrCAD/Allegro physical design or backend products are CPU and memory-bound - especially true of the following back-end products: PCB Editor, PCB Router, APD, and PCB SI. Therefore, Cadence recommends a faster CPU for these products.

PCB products use both integer and floating point, so select a configuration that provides ample processing power in both areas. When choosing a machine, purchase one with the highest CPU rating. Because vendors are de-emphasizing their CPU clocking, use the vendors' chip-naming convention. Alternatively, use a performance benchmark measurement. For example, the SPEC site (<http://www.spec.org>) lists the hardware results from multiple vendors.

If two systems have comparable ratings, purchase the system with the larger Level 2 cache, even if its ratings are slightly slower. Buying a top-end CPU usually also brings a system with the latest motherboard, bus architecture, and RAM hardware.

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In the Windows environment, if the machine is recommended for gamers, it meets the needs of high-end physical implementation design. The exception to this rule is that for OrCAD/Allegro products, you do not need dedicated sound cards. A dedicated graphics card is recommended over a motherboard-based graphics card because motherboard cards share memory and bus access with the CPU.

Buy enough memory so you are not paging during your work. One gigabyte is a good starting point for average PCB designs but you may need to raise the total if you plan on auto-routing, signal integrity work, or multi-board simulation. A rule of thumb is to take a recently completed board, and your memory requirement would be:

- Memory requirements = 1000 Megs + (Design_Size_on_disk * 10) then round up to the next half gigabyte.
Example: If you have a 50 MB board, then you would need 2 GB of memory.
- If you plan on using centralized Cadence software, design, or library storage, a 100 Mbs network connection is recommended.
- Some of the products take advantage of multi-processors; at least four processors recommend (this can be either separate cores, multi-cores or hyperthreading).
- On Windows, the second chip can remove the performance penalty that is imposed by Virus checkers, inventory management, IP Protection and other overhead software that can be found installed on modern Windows systems. In this area, the Intel HT technology can help with Windows “overhead” processing.
- On UNIX systems, graphics programs will achieve better performance due to the nature of the X-windows architecture. The additional CPUs also will allow you to run background processes, such as auto-routers and simulators.
- In the Intel CPU world, Intel, Xeons and AMD chips typically leapfrog each other on which is the top performer.
- If you are considering a laptop computer, look at the “workstation replacement” laptops, even though they are heavier and have less battery life than more conventional laptops.