

# *Why SunPCi™?*

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*By the SunPCi Development Team*

<http://www.sun.com/desktop/products/sunpci/>

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# Introduction

This article outlines some of the advantages of using the SunPCi™ Product in your Sun™ workstation, over using a Sun workstation and a separate computer running the Microsoft Windows operating environment (PC). Some of these advantages are:

- Using PC applications and peripherals on your Sun workstation
- Installing multiple versions of Microsoft operating systems
- Conserving space in your work area
- Reducing power consumption
- Saving costs

## Using PC Applications and Peripherals

The biggest advantage a user gains by installing a SunPCi coprocessor card in a Sun workstation is the ability to run the Microsoft Windows operating system of his or her choice, at native speeds, while simultaneously running the Solaris™ operating system (Solaris OE) on the workstation. Even while using the Solaris OE desktop, with the SunPCi product running, users have the ability to switch between Solaris OE applications and PC applications at will, and can copy and paste text between them. The Solaris OE file system can be accessed from the Windows desktop to take advantage of file sharing.

Microsoft Windows applications and other PC applications run on the SunPCi coprocessor card just as they would on a PC, whether they are office productivity applications (such as Microsoft Office, Corel Perfect Office, and Lotus Smart Suite), software development applications (such as Visual C++ and Visual J++), or image manipulation software (such as Photoshop, PhotoDraw, or Picture It!).

Users also have the ability to use WinMail clients, with all of their capabilities, on their Sun workstation. Using PC-based e-mail applications, such as Netscape Messenger, Microsoft Outlook, or Eudora, users can receive and open e-mail attachments that are not accessible using dtmail. PostScript e-mail attachments and PDF files can be used with these pc-based e-mail applications. With the availability of free software utilities such as GhostScript and Adobe Acrobat, users can send and receive PostScript and PDF e-mail attachments with ease. In addition, Microsoft Word documents, Excel spreadsheets, and Power Point slide show attachments can be opened from the user's inbox, without the need for any conversions.

Users of the SunPCi coprocessor card can take advantage of many peripherals that are not supported by Solaris. Hardware such as scanners, handheld organizers, and digital cameras interface directly with the SunPCi product's serial, parallel, or USB ports, and the drivers run as they would on a standalone PC. Another advantage is the user's ability to display the SunPCi product window remotely on any Sun X11 display. Alternatively, by using an external monitor, users may have their UNIX sessions displayed to one monitor, and their Windows session on a second, yet still use only one keyboard, mouse, and workstation. Users also have the choice of using the physical Ethernet connection, when greater network performance is desired, or the virtual Ethernet connection through the Sun workstation, when scarcity of network connections is an issue.

## Installing Multiple Microsoft Operating Systems

A unique advantage the SunPCi coprocessor card offers to users is the ability to have multiple instances of Windows operating systems running simultaneously. By attaching multiple emulated hard drives users may have, for example, one instance of the SunPCi product

running their productivity applications, while the second is being used for development. When not in use, the other populated C: or D: drives may be compressed to save space on the file system. Users also have the ability to clone a drive image, or copy it for backup purposes. Text may be copied and pasted between SunPCi product sessions running simultaneously, an option not available using a standard PC.

As an example of this functionality, consider a developer writing a Microsoft application. The application must be maintained across all Microsoft operating systems. By using the SunPCi coprocessor card, the developer can use a single machine and boot different C: drives, each containing a different Microsoft operating system. For example, a drive containing the Windows 98 operating system may be booted, and the developer may make modifications to his or her application code, which may reside on the UNIX file system. Once modifications are made, the developer builds the Windows 98 image and tests it. The developer can then exit the SunPCi session and boot a C: drive containing Windows NT, and test the image there. In this vein, the developer can continue booting different drives that contain Windows 2000 and Windows XP, testing the application against each operating system. If the developer had multiple SunPCi coprocessor cards installed in his or her workstation, he or she would not have to exit the SunPCi session each time, but instead could boot multiple operating systems simultaneously.

Cloning drive images is a valuable feature, as well. Consider this scenario: a university Computer Science lab is using the SunPCi coprocessor card in their lab machines. Before the beginning of each lab, the lab manager deletes the existing C: drive from each system and installs a new drive image, using a "golden master" which has been copied onto a cd. As a result, the students start using their lab systems in a known state. The correct versions of applications are installed, the system is free of viruses, and any previous modifications to the system are eliminated.

## Space Conservation

For those users for whom desktop space is a precious commodity, the SunPCi coprocessor card provides an effective solution. By eliminating the separate PC, monitor, keyboard, and mouse the user reclaims some desk space, without losing the functionality and convenience of a PC. This space conservation could prove valuable when using the SunPCi product in a server configuration, as well. Clients can access the PC server applications from the Sun workstation, thus eliminating a second desktop system.

## Power Conservation

There are other benefits to using a SunPCi coprocessor card instead of a Sun workstation and a standalone PC. Consider, for example, the power savings you achieve by eliminating the PC from your desktop. Instead of two systems and monitors sitting on your desk using power, now you have only one. This will help lower your energy consumption, not only by saving electricity, but also by lessening your heating and cooling requirements. Noise pollution is reduced as well, by eliminating excess fan noise from your office. The SunPCi coprocessor card meets US Energy Star compliance requirements, thereby granting you peace of mind knowing that you're helping your planet.

## Cost Savings

The SunPCi coprocessor card offers a cost savings advantage, as well. The low list price of the SunPCi product is very competitive with many of today's PCs, and in many cases is cheaper. There is no need to buy a separate monitor or printer, because you use the ones already attached to the Sun workstation. As discussed previously, the user can take advantage of other peripherals attached to the Sun workstation, as well as those not supported by Solaris OE. The

SunPCi coprocessor cards can also be configured as servers and clients, therefore eliminating the need for additional machines in the office.

## In Closing

There are many advantages to using a SunPCi coprocessor card over a PC. We have discussed a few of them here, and the user will, no doubt, come across several more instances in the future. We on the SunPCi Development Team encourage you, the user, to let us know when the SunPCi coprocessor card provides a solution for you that may not have been discussed here. In this way, we can continue to provide the interoperability that has become our hallmark.