

About Expansion Cards

What is an expansion card?

An expansion card (expansion board) is an add-on circuit board that is used to connect devices such as modems, sound cards, graphics cards, and network interface cards to the computer.

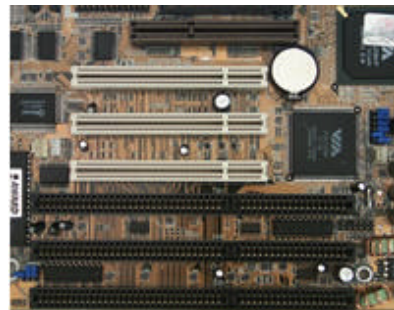
Expansion boards fit into sockets on the computer motherboard called expansion slots. These expansion slots connect the expansion board or card to the main components of the computer.



What types of expansion slots might be on my computer?

There are three types of expansion slots found in modern computers: PCI, AGP, AND ISA.

They differ primarily in how fast they transfer information between the microprocessor and the expansion board.

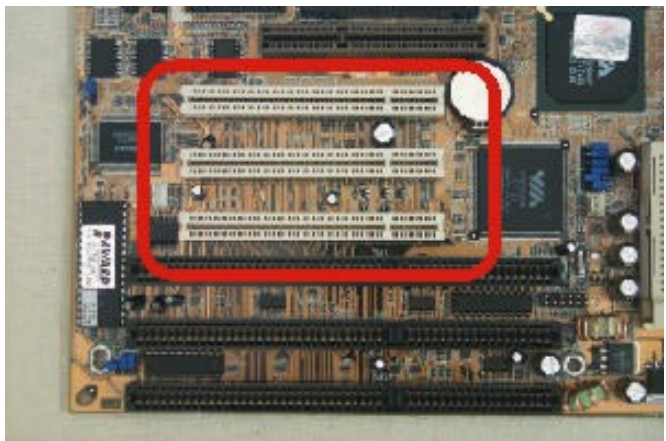


PCI (Peripheral Component Interconnect)

PCI is the most common expansion slot found in modern computers. It is found in both Macintosh and Windows based computers.

PCI slots provide a high-speed data path between the computer and peripheral devices connected by expansion cards. Many types of expansion cards are available. These include network interface cards, sound cards, graphic cards, modem cards, and cards that supply extra ports for the computer.

There are typically two to four PCI slots on the motherboard.



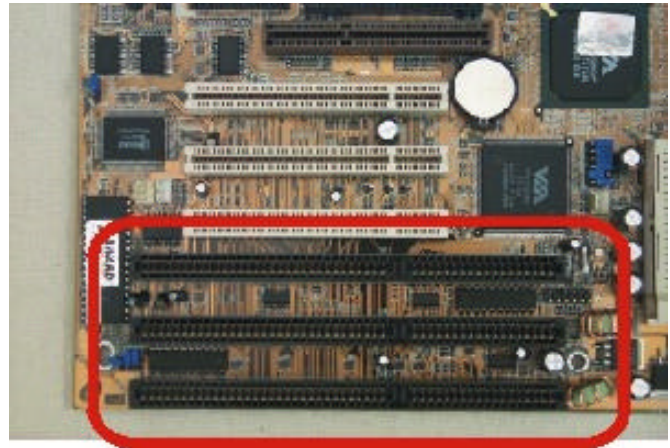
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ISA (Industry Standard Architecture)

ISA is an expansion slot found only in Windows based computers.

It operates at a much slower speed than PCI. Thus most ISA expansion cards that are available work with slower devices such as modems.

Most Window based computers today contain a mix of PCI and ISA slots. However, the ISA slot is expected to be eliminated soon.

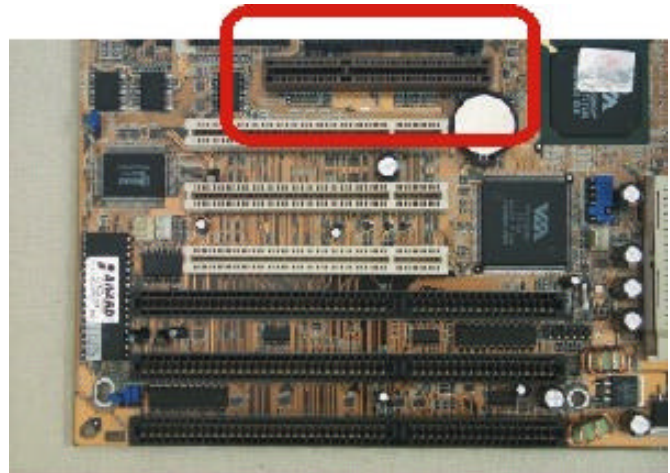


AGP (Accelerated Graphics Port)

AGP is a specialized expansion slot used only for a graphics or video card. It is found in both Macintosh and Windows based computers.

AGP operates at a much faster speed than PCI. Only one AGP slot is provided on AGP-equipped motherboards.

AGP slots are commonly rated as 1x, 2x or 4x which refers to the transfer rate of the slot. *The transfer rate of the video/graphics card should match the transfer rate of the slot.*



What are some types of expansion cards?

Network Interface Card (NIC)

A network interface card is an expansion board that is used to control the exchange of data between the computer and a network.

Most NICs are designed for a particular type of network, such as Ethernet or Token Ring.

Modern network interface cards are produced for PCI expansion slots.



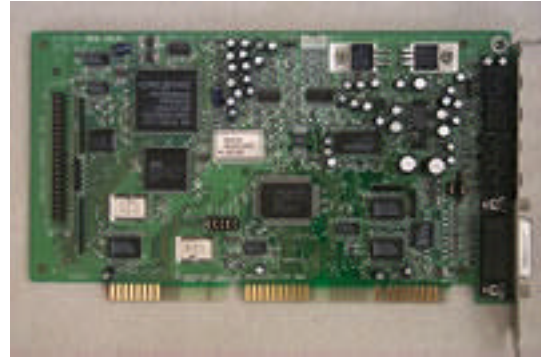
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Sound card

A sound card is an expansion board that enables a computer to manipulate and output sounds.

Sound cards are necessary for nearly all CD-ROMs and have become commonplace on modern personal computers.

Sound cards enable the computer to output sound through speakers connected to the board, to record sound input from a microphone connected to the computer, and to manipulate sound stored on a disk.



Graphics Card (display adaptor)

A graphics card is an expansion board that controls and produces video on the monitor.

Modern display adaptors contain RAM memory, so that the computer's RAM is not used for storing displays. The amount of video memory is a major factor in determining the screen resolution and the number of colors that can be displayed on the monitor.

In addition, most graphics cards have their own processor for performing graphics calculations. This allows for complex graphic animations to be displayed. Graphic cards are produced for PCI and AGP expansion slots.

