

# How Ports Work

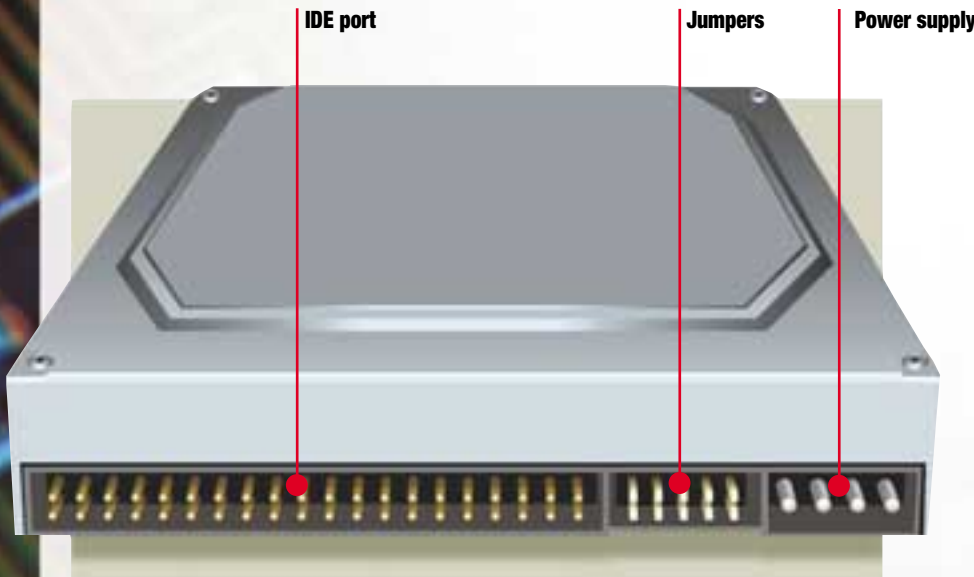
A computer communicates with all of its internal devices and external peripherals through various ports and interfaces. All of the connections made through these ports and interfaces ultimately connect devices ranging from keyboards to monitors to video cards to the system's main circuit board, or **motherboard**. Once devices are in touch with this central communications center, they can share data with and take orders from the rest of the system.

Ports usually connect up to two devices, but some ports, such as the SCSI (Small Computer System Interface), are referred to as **buses**, because you can connect up to eight devices to the port.

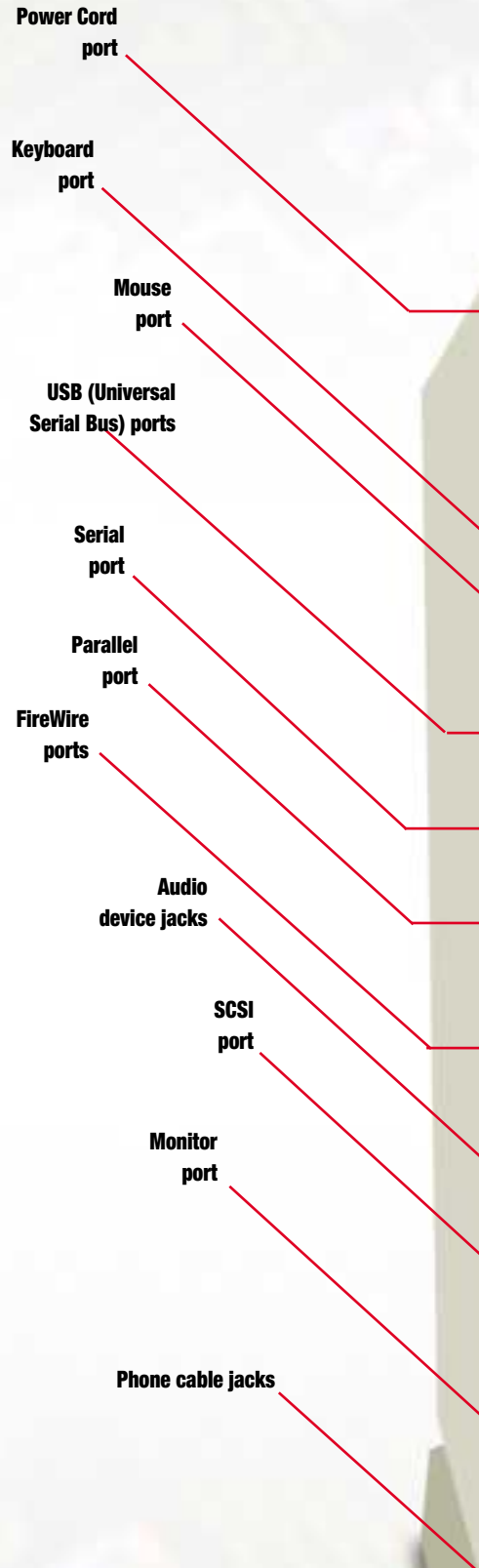
Typical PC users are probably most familiar with external ports, unless they really enjoy tinkering inside the system. External ports provide a communication link from a device, such as an external modem, printer, or mouse, to the motherboard. Internal ports, such as the AGP

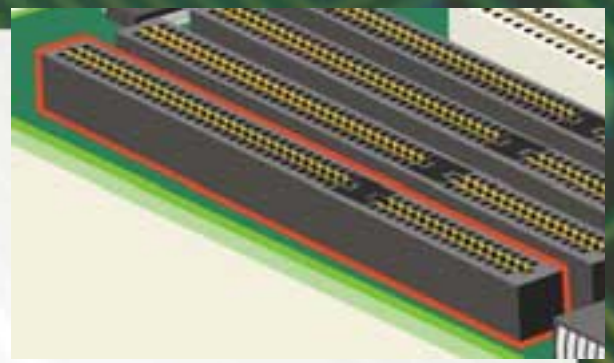
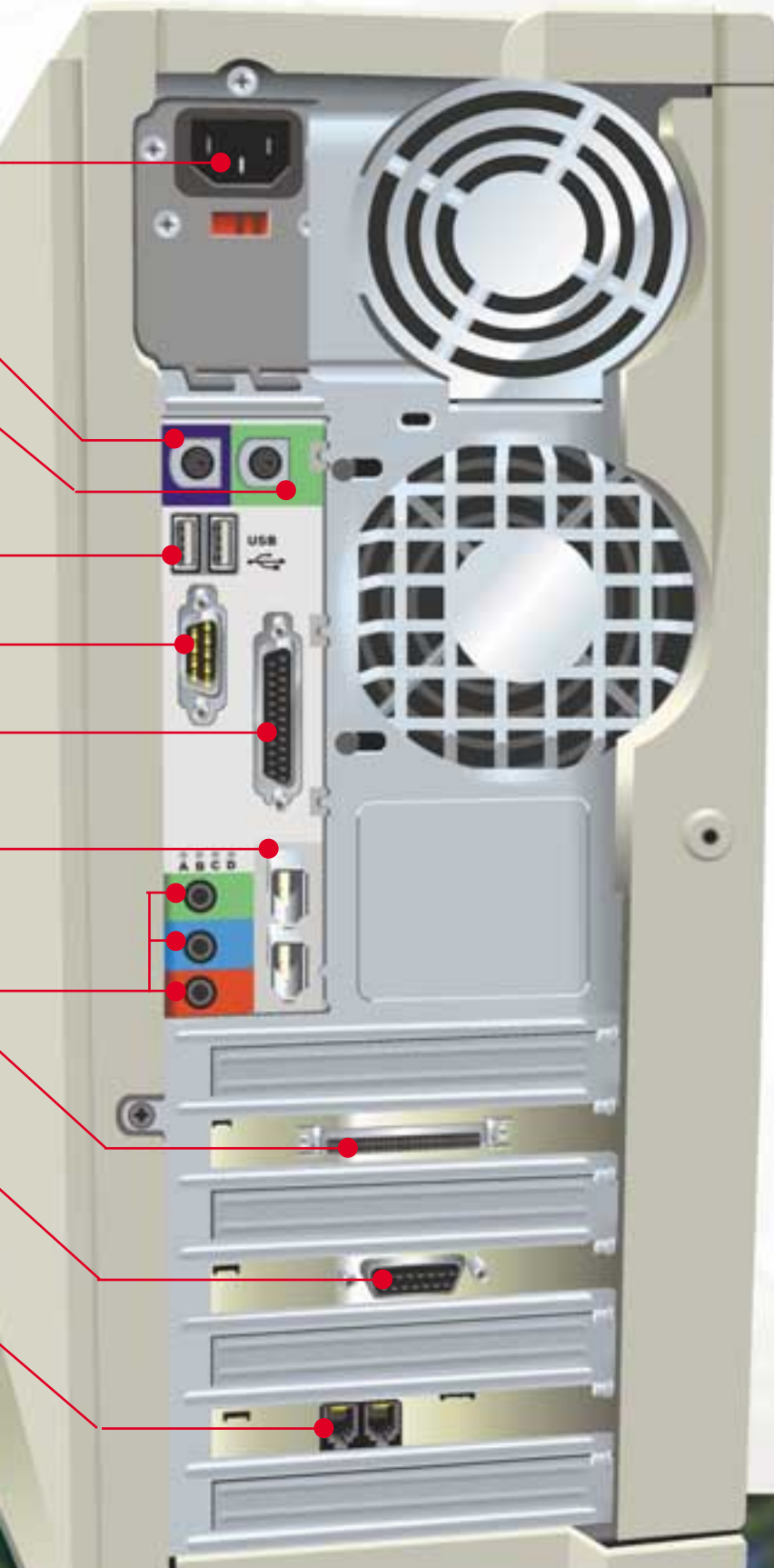
(Accelerated Graphics Port) and PCI (Peripheral Component Interconnect) slot, are built into the motherboard and are used for adding devices such as internal modems or video accelerator cards. In some cases, internal slots host expansion cards that actually provide the PC with another external port. ISA (Industry Standard Architecture) slots often hold serial or parallel port expansion cards, and PCI slots often host network cards.

Storage interfaces, such as IDE (Integrated Drive Electronics) or EIDE (Enhanced Integrated Drive Electronics) connections are built into the motherboard and attached to internal devices such as hard drives and CD-ROM drives. These pages provide a quick reference to the ports and interfaces found on typical consumer PCs.

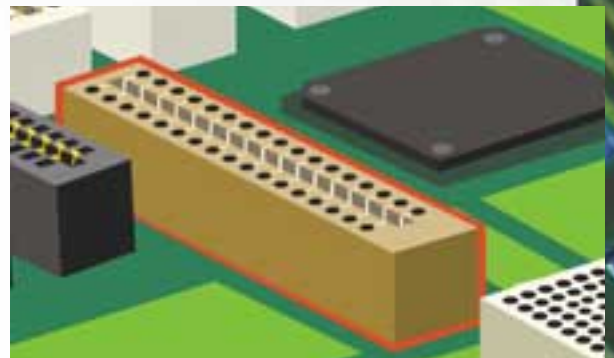


Even devices located inside the PC's case, such as hard drives, use ports and cables to communicate with the rest of the computer. This diagram illustrates the connections for a hard drive's power supply cable and IDE cable, which transfers data to other PC components. Jumpers are tiny switches used to configure a device. In hard drives, jumpers can determine whether the device is a master (main) or slave (secondary) drive.

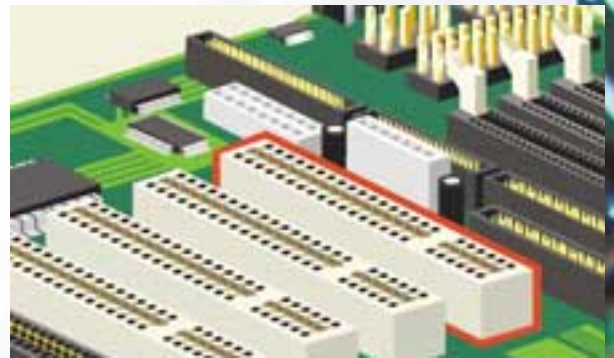




ISA slots were among the earliest expansion slots featured on a motherboard. Most current PCs provide only one or two ISA slots because expansion cards are typically built to use the faster PCI slots.



Adding a video card to a computer system usually means using the AGP. This port, which is normally located above the ISA slots on the motherboard, provides a high-speed connection for moving video information.



PCI slots support high-performance expansion cards and simplify the installation of new cards with their Plug-and-Play capabilities. Modern systems typically feature two to four PCI slots on a motherboard.