A printer must have a compatible interface with the computer to print. Typically, printers connect to home computers using a parallel, USB, or wireless interface. Printers may connect to a network using a network cable or a wireless interface.

Serial

Serial data transfer is the movement of single bits of information in a single cycle. A serial connection can be used for dot matrix printers because the printers do not require high-speed data transfer.

Parallel

Parallel data transfer is faster than serial data transfer. Parallel data transfer moves multiple bits of information in a single cycle. The data transfer path is wider than the serial data transfer path, allowing data to move more quickly to or from the printer.

IEEE 1284 is the standard for parallel printer ports. Enhanced Parallel Port (EPP) and Enhanced Capabilities Port (ECP) are two modes of operation within the IEEE 1284 standard that allow bidirectional communication.

SCSI

Small Computer System Interface (SCSI) uses parallel communication technology to achieve high data-transfer rates.

USB

USB is a common interface for printers and other devices. When a USB device is added to a computer system that supports plug-and-play, the device is automatically detected and starts the driver installation process.

FireWire

FireWire, also known as i.LINK or IEEE 1394, is a high-speed communication bus that is platform independent. FireWire connects digital devices such as digital printers, scanners, digital cameras, and hard drives.

FireWire allows a peripheral device, such as a printer, to plug directly into a computer. It also allows the device to be hot-swappable. FireWire provides a single plug-and-socket connection that can attach up to 63 devices. FireWire has a data transfer rate of up to 400 Mb/s.

Ethernet

Connecting a printer to the network requires cabling that is compatible with both the network and the network port installed in the printer. Most network printers use an RJ-45 interface to connect to a network or wireless interface.

Most manufacturers sell maintenance kits for their printers. For laser printers, the kit might contain replacement parts that often break or wear out:

- •Fuser assembly
- •Transfer rollers
- •Separation pads
- •Pickup rollers

When you install new parts or replace toners and cartridges, visually inspect all internal components and perform the following tasks:

- •Remove bits of paper and dust
- •Clean spilled ink or toner
- •Look for worn gears, cracked plastic, or broken parts

If you do not know how to maintain printing equipment, call a manufacturer-certified technician

Printer Maintenance

Make sure that you turn off and unplug any printer before performing maintenance. Use a damp cloth to wipe off dirt, paper dust, and spilled ink on the exterior of the device.

On some printers, print heads in an inkjet printer are replaced when the cartridges are replaced. However, sometimes print heads become clogged and require cleaning. Use the utility supplied by the manufacturer to clean the print heads. After you clean them, test them. Repeat this process until the test shows a clean and uniform print.

Printers have many moving parts. Over time, the parts collect dust, dirt, and other debris. If not cleaned regularly, the printer may not work well or could stop working completely. When working with dot-matrix printers, clean the roller surfaces with a damp cloth. On inkjet printers, clean the paper-handling machinery with a damp cloth. Some printer parts must be lubricated with special grease. Check the documentation to determine if your printer needs this grease and the locations to use it.

CAUTION: Do not touch the drum of a laser printer while cleaning because you can damage the drum surface.

Laser printers do not usually require much maintenance unless they are in a dusty area or are very old. When cleaning a laser printer, use a specially designed vacuum cleaner to pick up toner particles. A standard vacuum cleaner cannot hold the tiny particles of toner and may scatter them about. Use only a vacuum cleaner with High Efficiency Particulate Air (HEPA) filtration. HEPA filtration catches microscopic particles within the filters.

Thermal printers use heat to create an image on special paper. To extend the life of the printer, clean the heating element of the thermal printer regularly with isopropyl alcohol.

Choosing the correct paper type for a printer helps the printer last longer and print more efficiently. Several types of paper are available. Each type of paper is labelled with the type of printer for which it is intended. The manufacturer of the printer may also recommend the best type of paper.

Printers, like all other electrical devices, are affected by temperature, humidity, and electrical interference. Laser printers produce heat and should be operated in well-ventilated areas to prevent overheating.