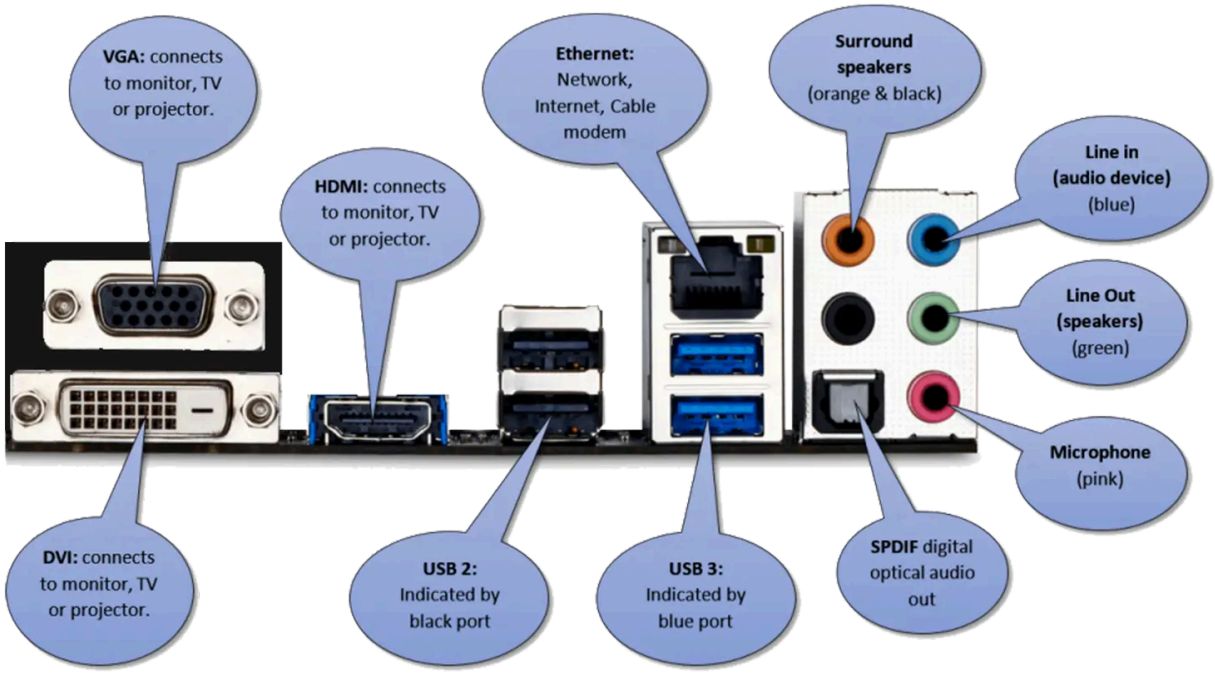
Cables & Ports

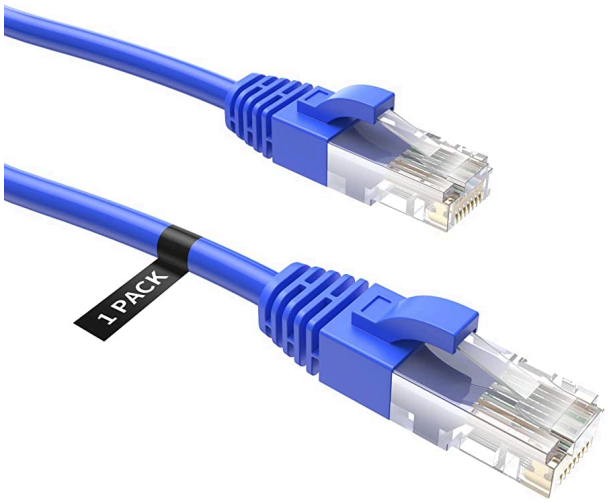


A cable is a physical wire or bundle of wires that transmits data or power between devices. Cables are often used to connect peripheral devices such as printers, keyboards, and mice to the computer. A port is the physical connection point on a computer or peripheral device that allows a cable to be plugged in. Cables and ports come in different shapes and sizes depending on their intended use.

To identify these cables and ports, look for the shape and number of pins, the size and shape of the connector, and any distinguishing colors or labels. For example, USB-C is often labeled with a small lightning bolt symbol.

It's important to note that not all devices have every type of port, and some newer devices may only have USB-C ports. Be aware of which ports your devices have, and which types of cables are compatible. Understanding these common cables and ports can help you with troubleshooting if you're having a hard time getting a device or accessory to work.

Ethernet



Ethernet is a type of cable used to connect a computer or other device to a **local area network** (LAN). Unlike Wi-Fi, which is for wireless networking, Ethernet uses physical cables to transmit data. While this isn't always convenient, it offers some advantages over Wi-Fi. It looks a bit like a wider phone jack.

DVI

DVI (Digital Visual Interface) is an outdated video cable used to connect a computer or other device to a monitor or display. The port is rectangular with pins arranged in two rows. While they're not used much today, it may be helpful to identify them in case you're trying to use an older device.

VGA

Another outdated video cable used to connect a computer or other device to a monitor or display. The port has three rows of pins and is often blue. VGA is limited to a maximum resolution of 640x480, making it unsuitable for modern displays that require higher resolutions.

HDMI

HDMI (High-Definition Multimedia Interface) is a video interface commonly used in most modern devices. Originally designed for HD TVs, HDMI is now supported by almost any home audio/video device, including computers, home theater systems, game consoles, streaming devices, and more. HDMI supports high resolutions and refresh rates, and is capable of carrying both video and audio signals. One disadvantage of HDMI is that it has limited cable length and can suffer from signal degradation over long distances.

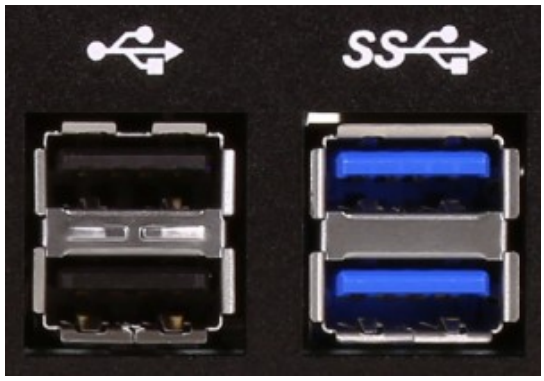
DisplayPort

DisplayPort is a digital video interface that supports high resolutions and refresh rates, like HDMI. One of its main advantages is supporting multiple displays from a single port and daisy-chaining monitors together. However, DisplayPort cables can be more expensive than other types, and only

computers and monitors are compatible. None of the major game consoles support DisplayPort, nor do most TVs. HDMI is supported on many devices, but DisplayPort has technical advantages. It's usually good to use DisplayPort (if it's an option) to connect your computer to a monitor so that you can leave HDMI ports free for other devices.

Watch: HDMI, DisplayPort, VGA, and DVI as Fast As Possible

USB Type-A



The USB Type-A connectors are the most recognizable and commonly used connectors in the world. They are flat and rectangular and can be found on nearly every desktop or laptop. USB provides a reliable and relatively fast data transfer rate. However, one disadvantage is that it can be relatively bulky and difficult to insert in tight spaces.

USB Type-A 2.0 and **USB Type-A 3.0** are the two standards for Type-A. 2.0 provides a maximum data transfer rate of up to 480 Mb/s, while USB 3.0 offers significantly faster speeds of up to 5 Gb/s, making it ideal for transferring large files quickly. To tell the two apart, look for the blue color coding on the inside of the 3.0 connector. They may be labeled with "SS"

(SuperSpeed) or feature a 3.0 icon to indicate the increased data transfer speed.

USB Type-B

USB Type-B is a connector commonly reserved for peripheral devices such as printers, scanners, and external hard drives. It is a square-shaped connector with beveled corners and two small tabs on the top and bottom.The primary reason for a separate port is to differentiate peripheral connections from the usual ones. This also eliminates the risk of accidentally connecting one host computer to another. Like Type-A, there is a faster 3.0 with a blue-colored insert.

Watch: Why This WEIRD USB Connector Exists (Type B)

USB Type-C

USB Type-C is a newer connector and port that has become increasingly popular in modern devices. It is a smaller, reversible connector that can transfer data, video, and power at faster speeds than previous USB versions. The port is also much smaller, allowing for thinner devices. Despite these many advantages it is not yet as widely supported as USB Type-A and Type-B. Newer MacBook models have abandoned multiple port types in favor of USB Type-C, which consolidates various connectors like USB Type-A, HDMI, VGA, and DisplayPort into a single port. PlayStation 5 and Nintendo Switch controllers also use USB-C. Although the physical USB-C connector is not backward compatible, the underlying USB standard is, and you can use a physical adapter to connect peripheral devices through this port.

USB Mini-B

USB Mini-B (or just Mini-USB) is a type of USB connector that is smaller than the standard USB Type-A and Type-B connectors. It was commonly used in older mobile devices such as digital cameras, portable hard drives, MP3 players, and PlayStation 3 controllers. However, it has largely been replaced by Micro-USB and USB Type-C connectors in newer devices.

USB Micro-B

USB Micro-B (or Micro-USB) is a smaller version of the USB-B connector that was introduced to accommodate the trend of smaller portable devices. It is commonly found on smartphones, tablets, GPS, PS4 controllers, and other small devices. Micro-B also comes in a 3.0 variant that has additional pins to support faster data transfer rates compared to the standard Micro

ports. The Micro connector is gradually being phased out in favor of the newer USB Type-C connector.

Audio Jack

Audio jacks and ports are used to connect audio devices to your computer or other devices. The most common type of audio jack is the 3.5mm (1/8 inch) mini-jack, which is found on most computers, smartphones, and other devices. 6.35mm jacks are typically used for professional audio applications such as musical instruments, amplifiers, studio headphones, and DJ equipment.

On a computer, the green audio jack is usually for speakers, the pink is for a microphone, and the blue is for line-in or other input devices. The left speaker is typically connected to the green port, while the right speaker is

connected to the black or gray port. Some computers also have a separate subwoofer jack, which is usually orange.

If you're using headphones, you can plug them into the green port on your computer or other device. Some computers and other devices also have a separate headphone jack, which is usually labeled with a headphone symbol.

It's worth noting that not all devices use the same color coding for their audio jacks, so it's important to check the documentation for your specific device if you're unsure which port is which. Additionally, some newer computers and devices may use a USB port or a digital audio interface instead of a traditional analog audio jack.