18 Types of Computer Connectors & Cables (With Pictures)

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Welcome to a beginner's guide and list of the types of computer connectors and cables. Over the years in computer history, many different kinds of cables were invented and re-invented. There are so many types of cables these days that a beginner will be completely lost in the tech jungle. Just which connector is which? Read on to find out!

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CABLE BASICS

Before going into the types of cables, let us start with some basic trivial information that may be useful.

THE CABLE STANDARDS

Computer cables are not random pieces of electrical wire, we usually identify cables and connectors using "strange numbers" such as RJ45 and IEC 60320. There is no need to be confused, these are just standard codes by the various international organizations. These are the few that you should be aware of:

- IEEE – Institute of Electrical and Electronics Engineers
- USB IF – USB Implementers Frontier
- RJ – Registered Jack
- IEC – International Electrotechnical Commission

MALE-FEMALE

There is also a "gender" in the world of connectors.

- The "male" part refers to the connector's side with pins.
- While "female" refers to the receptacle side.

Yep... It's kind of an adult thing.

DISPLAY CABLES

Now that we are done with the basics, let us move on to the display cables and connectors.

1) VIDEO GRAPHICS ARRAY (VGA)

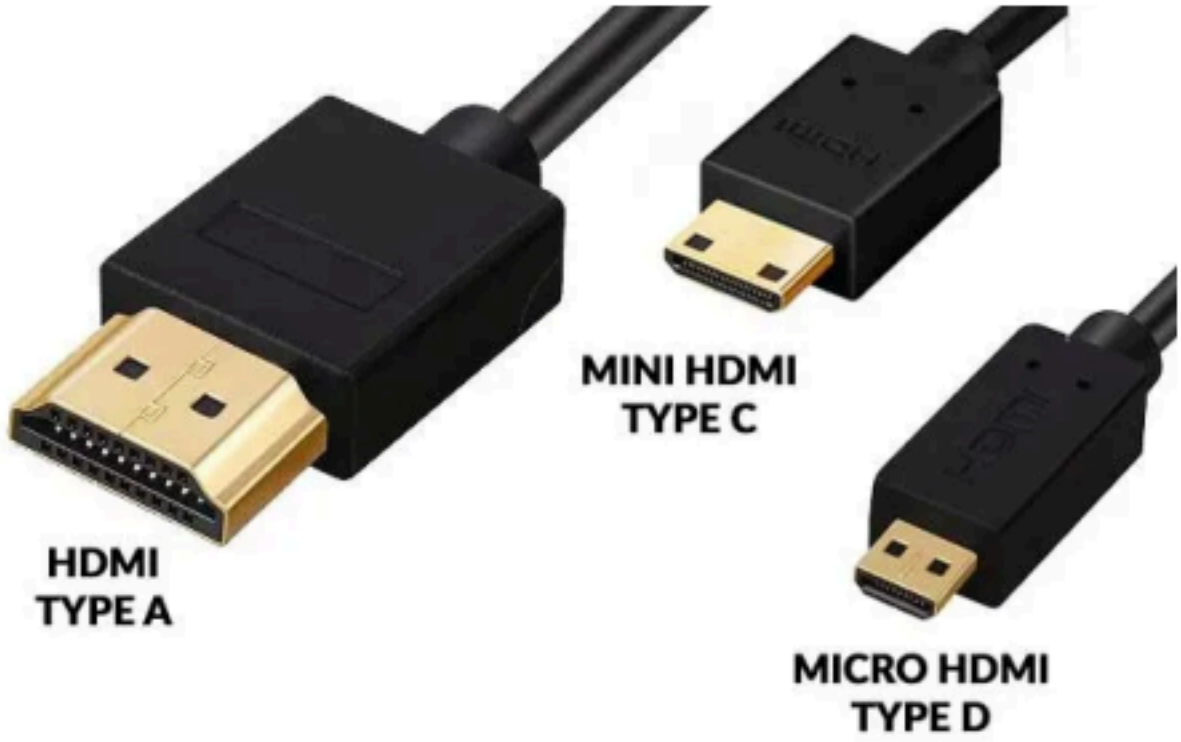
This is one of the older display connectors, also called an "analog video connector". This used to be everywhere in desktops and laptops, but the VGA connector could no longer catch up with the advanced video technologies. It was taken over by the DVI and HDMI connector.

2) DIGITAL VISUAL INTERFACE (DVI)

Following a need for a cable that is capable of handling more video data, the

DVI connector took over VGA. It was the "mainstream video connector" for a while, until the mobile market boom. People quickly realized that the size of the DVI connector is not good for mobile devices, and it is soon taken over by HDMI and display port connectors.

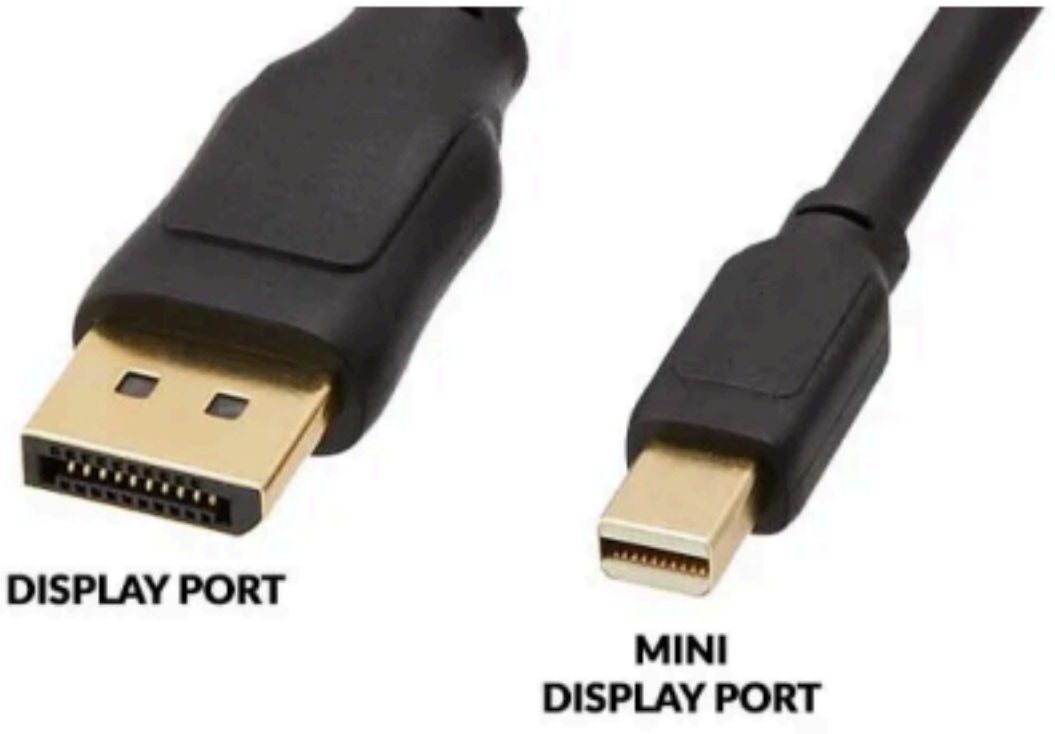
3) HIGH DEFINITION MULTIMEDIA INTERFACE (HDMI)



This is the "common Joe" that you see everywhere these days, and it comes in various different sizes to fulfill the needs of various devices in the market. In particular, the 3 most common ones are:

- **HDMI Type A**: The full-sized HDMI, is used on desktops and some laptops.
- **Mini HDMI Type C**: For the smaller tablets and ultrabooks.
- **Micro HDMI Type D**: For mobile devices.

4) DISPLAYPORT



You can call this the "successor of DVI cables" with a much smaller footprint, much more suitable for mobile devices. But just a quick trivial, display port and HDMI cables carry both video and audio signals; Technically speaking, they are not categorized as "pure video cables", but "audio-visual cables".

DEVICE CABLES

Next, we move on with one of the most confusing parts of computer connectors – The many devices

and miscellaneous connectors.

5) PARALLEL

Once upon a time in the stone age of computers, we connect printers to computers using these parallel cables. They are built like tanks and wouldn't even budge if you yanked hard at it. Of course, they could not handle large amounts of data fast enough and have been totally phased out.

6) SERIAL

The serial connectors are cousins to the parallel connectors. As some of you may have noticed, yes, these are the ancestors of the USB.

7) PERSONAL SYSTEM/2 (PS/2)

These are invented by IBM for their line of computers called Personal System, for the purpose of connecting the keyboard and mouse. It turned

out to be a good idea, got adopted by many other manufacturers, and became the de facto standard – Until USB took over.

8) UNIVERSAL SERIAL BUS (USB)

I don't think USB needs a lot of explanation, USB devices are everywhere these days. But what you do need to know, is that there are so many types of USB that it is rather confusing.

- **USB 1.0, 2.0, and 3.0** – These are the versions of USB, and every later version of the USB simply supports a better data transfer rate.
- **USB 3.1 & 3.2** – Still USB 3. But offers faster data transfer, and also capable of handling more power for fast charging.
- **Type A USB** – The common Joe USB connector that you see everywhere.
- **Type B USB** – The "square type" connector that is commonly used for printers.
- **Mini and micro Type B USB** – Used for mobile devices such as smartphones, tablets, and digital cameras.
- **Type C** – Also used for mobile devices, but this one is reversible. I.E. There is no direction, and you can plug this in upright or reversed.

9) FIREWIRE (IEEE 1394)

The FireWire is Apple's so-called early version of the USB, but this is not compatible with USB devices. While there are a couple of gadgets made for the FireWire, it was never too popular and was overshadowed by USB.

10) THUNDERBOLT

Following up with a not-so-popular FireWire, the Thunderbolt is the successor with a twist.

- **Thunderbolt 1 & 2** – Adopted much of the DisplayPort technologies. The Thunderbolt port is a versatile one that can be used to both

connect devices and output video.

- **Thunderbolt 3** – If you can't win them, join them. Apple finally cracked under pressure, this is pretty much a USB Type-C port with video output capabilities.

11) LIGHTNING

Lightning is the latest generation of iPhone/iPad connectors, and it is specific to Apple devices only. Well, the certain half-eaten fruit company definitely has no love for the mainstream standards.

AUDIO CABLES

Now for the audio cables, which seems to be the only one that has not changed much since the old days.

12) 3.5MM AUDIO JACK

This is another one that is commonly seen everywhere, but take note of the number of black stripes on the connectors.

- The one with 2 black stripes is what we call a 3 pole connector.
- While the one with 3 stripes is called a 4 pole connector.

The reason for that extra pole is to support an additional microphone on the earphones/headphones. So yep, just be aware that they are different.

13) OPTICAL FIBER AUDIO CABLE

Unlike the traditional copper wires, this one uses light to transmit data, and thus called "optical fiber". Although expensive, the reason why some people may choose optical fiber is that copper wires have a tendency to introduce noise (static sound).

Light signals do not introduce noise, and that results in a cleaner sound. Just don't stare into the ends of the optical fiber cable, some may use lasers and can blind people.

NETWORKING CABLES

Networking cables have not changed much since the old days as well, maybe that is because most of it has gone wireless...

14) ETHERNET

You may have seen this while connecting a wireless router to the modem. Yep, in the old days when we do not have wireless, this is what we use to connect the PC to the router. For you guys who want to sound like legit engineers – The standard for Ethernet is IEEE 802.3, and the connector is RJ45.

P.S. There are cat 5, cat 6, cat 7, and cat 8 ethernet cables. The difference is

in the supported bandwidth... Just get the latest cat 8 cables if unsure, they are technically backward compatible.

15) TELEPHONE

Well, you should know this from your home telephone, and it is also connected to AIO printers to send out faxes. Call this RJ11 if people want to get technical.

16) FIBER OPTIC CABLE

When it comes to a faster Internet – Electricity and light are 2 of the fastest things that we use to transmit data. But sadly, copper wires are reaching the technical limitations for data transfer. The newer generations of "serious networking devices" are skewed towards using fiber optic cables for ultra-fast data transfers.

POWER CABLES

For this final section, we will walk through the true survival of time – Power cords that have never changed since... forever.

17) POWER CORDS

The power cords of a computer comply with the IEC standards, which is the same as almost all of our other household appliances. Here are 3 of the common power plugs that you see in computers:

- **IEC 60320 C13 &C14**: The standard plug for desktop computers. Also known as the "kettle plug", because it looks just like the one we use for electrical kettles.
- **IEC 60320 C5 & C6:** This is the standard plug for the chargers of most laptops, also known as the "cloverleaf".
- **IEC 60320 C7 & C8:** Yet another standard plug for the chargers of laptops and even some speakers.

18) DC BARREL JACK

The common Joe that you see everywhere in the world of electronics... But take note – Even though it looks the same, these actually come in different diameter sizes.

USEFUL BITS

That's all for this guide, and here is a small section on some extras and links that may be useful to you.

LINKS & REFERENCES

- 16 Types of Computer Ports and Their Functions – Electronics Hub
- Computer Cable types and descriptions – HardSoft
- Different Types of computer connectors – IK Studies

THE END

Thank you for reading, and we have come to the end of this guide. I hope that this has helped you to better understand the various connectors, and if you have anything to share

with this guide, please feel free to comment below. Good luck and may the digital force be with you.

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JANUARY 31, 2023 AT 9:45 PM

Good information and well explained! Thanks very much appreciated. I am certain I will keep this website in mind as I am going through so many cables and figuring out if they are obsolete or still needed!

Reply

DENNIS
JANUARY 16, 2023 AT 3:56 PM

Thank you for that excellent summary.

Reply

CHERYL BEAN
NOVEMBER 9, 2022 AT 4:37 AM

Excellent. Thank you.

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