

Why are connector cables usually gold plated? Is it necessary?

It is not difficult for you to realize that the connectors of many different cables, from stereo jacks, HDMI cables, to Ethernet connectors, are often very eye-catching gold plated.

However, besides the aesthetic effect, does this gilding serve any other purpose? Let's find out right here.

Why are cable connectors gold plated?

The reason gold plating is often used for connection ports is simple: Reduce the rate of corrosion during use (retract and plug many times). We all know copper as the "standard measure" of electrical conductivity, but it quickly tarnishes when exposed to other elements. For this reason, bare copper connectors are not very durable, and transmission performance will degrade over time. (As copper oxidizes and begins to tarnish, its resistance increases.)

Meanwhile, gold tarnishes at a much slower rate, even though it conducts electricity worse than copper. Gold plating over a copper connector will essentially help ensure that the surface of the connector capable of transmitting or receiving a signal is 'cleaner', and of course more durable. Gold is used in all types of cables for this reason, from audio connectors to Ethernet and HDMI cables that carry digital signals. If a connector is not gold plated, it is more likely to be coated with nickel instead.

On top of that, manufacturers are aware that gold has a certain appeal due to the physical properties and aesthetics of the product. Gold plated cable connectors are more marketed than nickel plated connectors, although the benefits are clearly not much.



Gold plating will not 'improve' the HDMI signal

One of the popular connection cables using gold-plated connectors on the market is the HDMI cable, which has the role of transmitting digital signals. The main benefit here is the same as with any other cable: gold is less susceptible to corrosion. Some people believe that a gold-plated cable will somehow improve the signal quality, but this is not really the case with HDMI cables.

The problem here is that you may only notice a drop in signal quality if your HDMI cable is damaged or malfunctioning. There are signs that the HDMI cable is having problems, such as white dots on the screen. This is why you shouldn't spend a lot of money on gold-plated HDMI cables. They will only bring aesthetic effects.

You're better off spending your money on a modestly priced cable that meets HDMI 2.1 specifications, supporting higher bandwidths up to 48Gb/s. These cables will let you stream 4K HDR video at up to 120fps, maximizing your Xbox Series X and PlayStation 5 experience.

In case you are having trouble transferring high resolution (4K) content, HDR video, or high frame rate, it is possible that your cable is old and does not meet the required specifications.

Gold connector can imply higher quality

While not a rule of thumb, cables with gold-plated connectors are generally of higher quality in general. They can be more expensive and target a certain group of users.

You'd be hard-pressed to find a sturdy and durable cable without the gold plating. So, if you are looking for a cable that can last a long time, the gold plated connector is the right choice. Spending a bit more on a cable with a stiffer coating and a more durable connector will be much more profitable. This is especially true for cables that you will have to unplug frequently.

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