Ethernet cable and how it works

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1. The best 8 long-range Wifi routers in 2017

'Appearance' of Ethernet cable

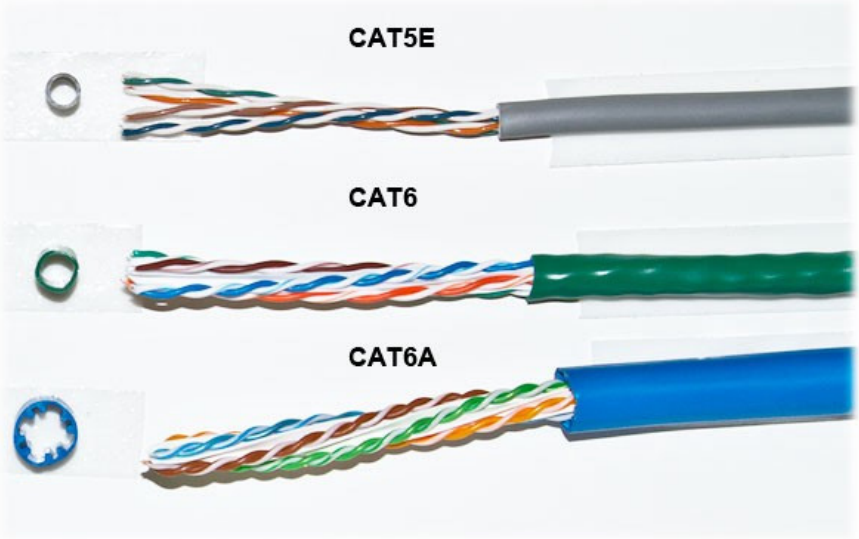
Ethernet cables are almost like a telephone cable but larger and have more wires. Both cables have similar shapes and plugs, but the Ethernet cable has eight wires and a larger socket than the four-wire telephone cable. Ethernet cables are plugged into Ethernet ports, an Ethernet port on the computer can be accessed via the Ethernet card on the motherboard. Ethernet cables come in many different colors, but telephone cables are usually gray.

1. How to click the 4-wire network cable, press the network cable with the phone cord

Types of Ethernet cables

Ethernet cables usually support one or more industry standards such as CAT 5 network cables and CAT 6 network cables. Crossover cables are a special type of Ethernet cable designed to connect two computers

together. In contrast, most types of Ethernet cables are designed to connect a computer to a router or switch.

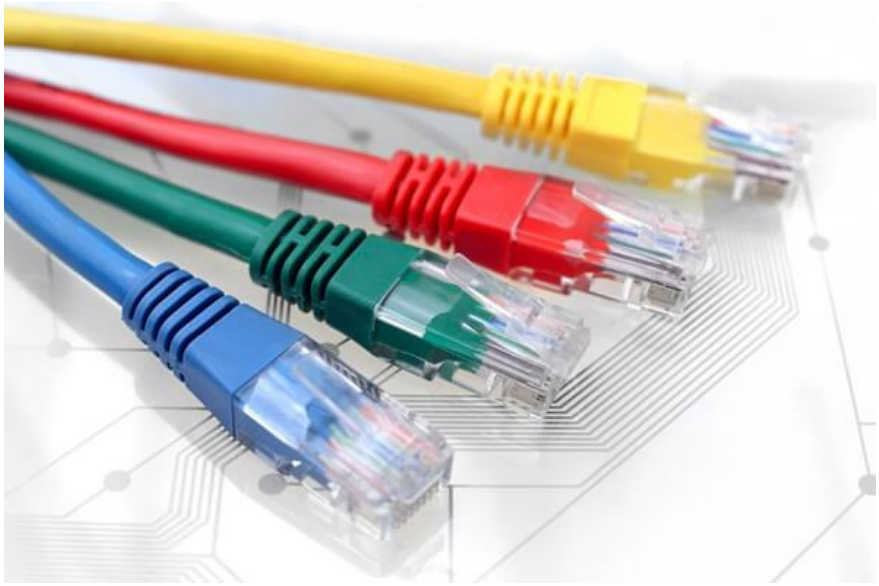


Ethernet cables have two types: solid core (solid) and braided core (stranded). Solid-core Ethernet cables have better performance and are improved to avoid electrical contamination. This cable is often used for corporate networks, wiring inside office walls, or under laboratory floors to fixed locations.

Braided core Ethernet cables are less prone to cracking and breaking, making them suitable for travelers or in home network settings.

Limitations of Ethernet cables

A single Ethernet cable is like a power cord, has a limited maximum distance, which is a time limit before signal loss (called a degradation). This is due to their electrical transmission characteristics and are directly affected by interference around the cable.



Both ends of the cable should be close enough to receive a fast signal, but far enough to avoid electrical contamination. However, this does not limit the size of a network because hardware such as a router or hub can be used to connect multiple Ethernet cables together in the same network. The distance between the two devices is called the network diameter.

The maximum length of a CAT5 cable, before the decline occurs, is 324 feet. CAT6 can be up to about 700 feet. Note, Ethernet cables may be longer but lose signal, especially if other electrical devices pass through.

Note: Ethernet cable length will vary depending on each thin, standard 10 base 2 cable or 10 base 5 thick cable.

Older cables cannot be longer than 600 feet while new cables can reach about 1,640 feet in length. A problem when using a short cable is that reflection may occur. However, some users have reported no problems with 4-inch cable lengths.

There are different types of RJ-45 connectors, one designed for use with braided core cables, generally incompatible with solid core cables. Other RJ-45 connectors can work with both solid core and braided cores.

Alternatives to Ethernet cables for computer networks

Wireless technologies such as Wifi and Bluetooth have replaced Ethernet cables on many home and business networks.