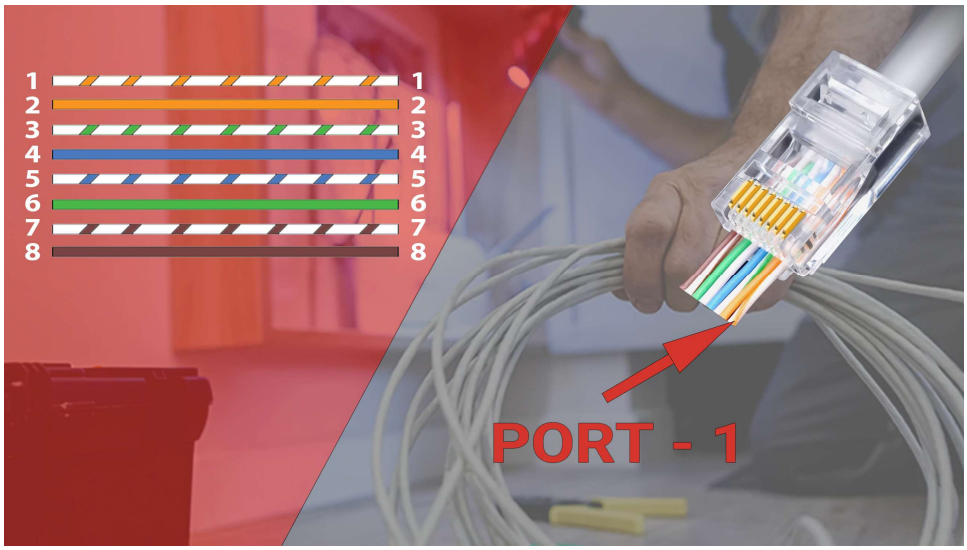
Cat 5 Cable Diagram: Straight-Through Wiring vs Crossover Wiring

Regarding Ethernet cables, there are two main types of wiring configurations: straight-through and crossover. The choice between these two depends on the devices you're trying to connect.

Straight-Through Wiring

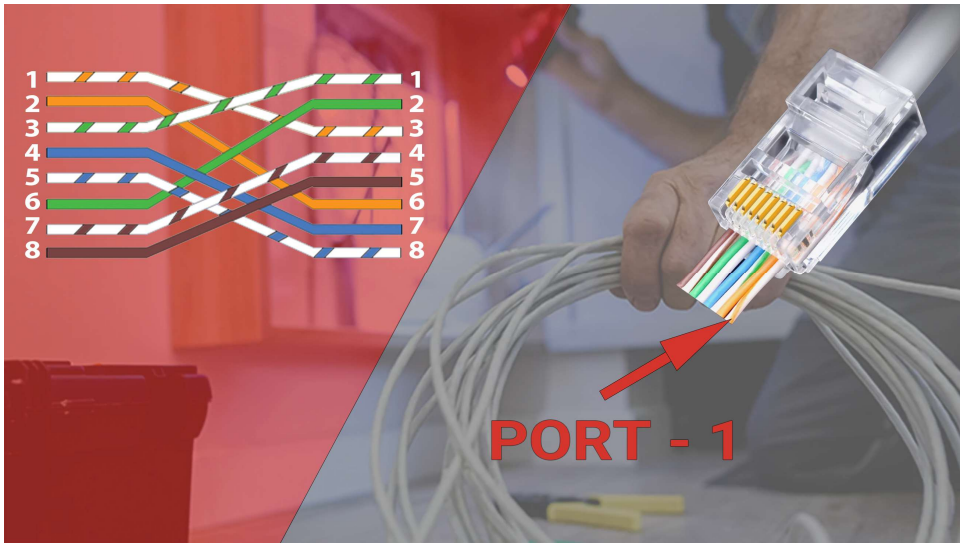
In straight-through wiring, both cable ends follow the same wiring order. This means that Pin 1 at one end of the cable connects to Pin 1 at the other end, Pin 2 connects to Pin 2, and so forth. This is the standard cable configuration for connecting devices that use different types of Ethernet ports. For instance, you'd use a straight-through cable to connect: a computer to a switch or hub, a router to a switch or hub, a modem to a router.



Crossover Wiring

In crossover wiring, the order of the wires at one end of the cable is reversed at the other end. This means that the Transmit pins (1 and 2) at one end are connected to the Receive pins (3 and 6) at the other end, and vice versa.

Crossover cables connect devices that use the same type of Ethernet port. They essentially "cross over" the Transmit and Receive lines, allowing the two devices to communicate directly without the need for a switch or hub. Typically, you'd use a crossover cable to connect: a computer to a computer, a switch to a switch, a router to a router.



It's worth noting that many modern devices can automatically detect the type of cable and adjust their wiring configuration accordingly. This feature, known as Auto-MDIX, has made crossover cables less necessary in recent years. However, it's still important to understand the difference between straight-through and crossover wiring, especially when working with older equipment.