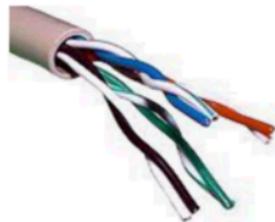


Twisted Pairs (Copper Pairs)

- **Unshielded Twisted Pair (UTP)**

- Used in telephone, ethernet, video applications, etc.
- It is easy to install and less expensive than other media
- It is subject to electromagnetic interference
- There are different types of cables with different diameters



Examples:

Category 5 (CAT5): Bandwidth equal to 100 MHz (@ 100m). Used in 10 Mb/s and 100 Mb/s Ethernet

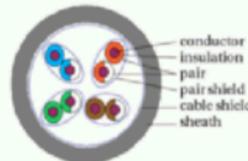
CAT5e: Bandwidth equal to 100 MHz (@ 100m) . Used in 100 Mb/s and 1 Gbit/s Ethernet.

CAT6: Bandwidth equal to 250 MHz (@ 100m). Supports 1Gbit/s at distances larger than Cat 5e

- **Shielded Twisted Pair (STP)**

- Uses a metallic shield to protect the cable from interference
- Is more expensive and more difficult to install than UTP

S/STP



Category 7 (CAT7) : Bandwidth equal to 600 MHz(@ 100m). Supports bit rates up to 10Gbit/s (10 GbE), using a cable with 4 STP pairs.