
Topic / Issue: Twisted Pairs (TP) Cabling

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(Other associated names are RJ-45, 10Base-T, STP or UTP)

This cable is now widely used (commonly referred to as 10BASE-T) uses Category 3, 4, or 5, Shielded Twisted-Pairs (STP) or Unshielded Twisted-Pair (UTP) cables in a star topology. Each node attaches to a hub, switch or concentrator via a TP cable using RJ-45 connectors.

Following rules apply when using Twisted-Pair Ethernet cabling.

Maximum segment length (unshielded) is 100m

Maximum number of trunk segment is 1024

Maximum number of repeaters is 4

Advantages of Twisted Pair:

Technology and standards are mature and stable for voice communications.

Telephone systems, which use twisted pair wiring, are present in most buildings, and unused pairs usually are available for network connections.

Can be installed relatively easily.

Is relatively inexpensive.

Disadvantages of Twisted Pair:

Sensitive to EMI and eavesdropping, especially unshielded.

The requirement to purchase Hubs (concentrators).

Summary:
(If required)