Early Ethernet Standards

10BaseT

The number refers to the speed: 10Mps

The letter T refers to the type of cable used: Twisted-Pair.

The word Base refers to the signaling type: Baseband
(Baseband means that the cable carries only one type of signal.
Contrast with Broadband -as in cable TV- where the cable carries
multiple signals or channels.)

10BaseT

- **Speed**: 10 Mbps
- **Distance**: 100 meters between the hub and the node
- **Node limit**: No more than 1024 nodes per hub
- **Topology**: Star-bus topology: physical star, logical bus
- **Cable type**: Cat 3 or better UTP cabling with RJ-45 connectors

10BaseFL

- **Speed**: 10 Mbps
- **Distance**: 2000 meters between the hub and the node
- **Node limit**: No more than 1024 nodes per hub
- **Topology**: Star-bus topology: physical star, logical bus
- **Cable type**: Multimode fiber-optic cabling with ST or SC connectors

Modern Ethernet Standards

100BaseT

- **Speed**: 100 Mbps
- **Distance**: 100 meters between the hub/switch and the node
- **Node limit**: No more than 1024 nodes per hub/switch
- **Topology**: Star-bus topology: physical star, logical bus
- **Cable type**: Cat 5 or better UTP or STP cabling with RJ-45/8P8C connectors

100BaseFX

- **Speed**: 100 Mbps
- **Distance:** Two kilometers between the hub/switch and the node
- **Node limit**: No more than 1024 nodes per hub/switch
- **Topology**: Star-bus topology: physical star, logical bus
- **Cable type**: Multimode fiber-optic cabling with ST or SC connectors

1000BaseSX

- **Speed:** 1000 Mbps / 1 Gbps
- **System**: Multi-mode fiber optic
- **Distance:** 220 - 500 meters
- **Wavelength**: 770 - 860 nanometer light
- **Cable type**: Multimode fiber-optic cabling with LC connector commonly used.

1000BaseLX

- **Speed:** 1000 Mbps / 1 Gbps
- **System**: Single-mode fiber optic or multi-mode fiber optic
- **Distance:** 5 - 70 kilometers
- **Wavelength:**1270 - 1335 nanometer light
- **Cable type**: Multimode fiber-optic cabling with LC connector.

1000BaseT

- **Speed:** 1000 Mbps / 1 Gbps
- **System**: Four pairs copper wire. Half-duplex (CSMA/CD) and full-duplex.
- **Distance:** 100-300 meters
- **Cable type**: Cat 5, Cat6, Cat6a and Cat7 - STP or UTP with RJ-45 connector.

The vast majority of wired networks today feature Gigabit Ethernet, but that has not stopped developers and manufacturers from pushing well beyond those limits. New implementations of ethernet standards are: 10/25/40/100 gigabit.