

EtherNet

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Ethernet is now widely prevalent as a link-layer technology for local area/campus network, and is making inroads in other market segments as well, for example as a framing technique for wide-area connections (replacing ATM or SDH/SONET in some applications), or as fabric for storage networks (replacing Fibre Channel etc.) or clustered HPC systems (replacing special-purpose networks such as Myrinet etc.).

From the original media access protocol based on [CSMA/CD](#) used on shared coaxial cabling at speeds of 10 Mb/s (originally 3 Mb/s), Ethernet has involved to much higher speeds, from Fast Ethernet (100 Mb/s) through Gigabit Ethernet (1 Gb/s) to 10 Gb/s. Shared media access and bus topologies have been replaced by star-shaped topologies connected by switches. Additional extensions include speed, duplex-mode and cable-crossing auto-negotiation, virtual LANs (VLANs), flow-control and other quality-of-service enhancements, port-based access control and many more.

The topics treated here are mostly relevant for the "traditional" use of Ethernet in local (campus) networks. Some of these topics are relevant for non-Ethernet networks, but are mentioned here nevertheless because Ethernet is so widely used that they have become associated with it.

- [Duplex modes and auto-negotiation](#)
- [LAN Collisions](#)
- [LAN Broadcast Domains](#)

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