

**Auto-MDIX**

A protocol which allows two Ethernet devices to negotiate their use of the Ethernet Transmit (Tx) and Receive (Rx) cable pairs. This allows two Ethernet devices with MOI or MDI-X connectors to connect without using a cross-over cable.

Baud

A unit of measurement that denotes the number of bits that can be transmitted per second. For example, if a modem is rated at 9600 baud it is capable of transmitting data at a rate of 9600 bits per second.

Bandwidth

The maximum capacity of a network channel. Usually expressed in bits per second (bps). Ethernet channels have bandwidths of 10,100, and 1000 Mbps (Gigabit).

bps

Bits Per Second is the unit used for measuring line speed, the number of information units transmitted per second.

Broadcast

A transmission initiated by one station and sent to all stations on the network.

Byte

The amount of memory needed to store one character such as a letter or a number. Equal to 8 bits of digital information. The standard measurement unit of a file size.

Category 5

A performance classification for twisted pair cables, connectors and systems. Specified to 100 MHz. Suitable for voice and data applications up to 155 Mbps.

Category 5e

Also called Enhanced Category 5. A performance classification for twisted pair cables, connectors and systems. Specified to 100 MHz. Suitable for voice and data applications up to 1000 Mbps.

Category 6

A performance classification for twisted pair cables, connectors and systems. Specified up to 250 MHz.

CSMA/CD

Carrier Sense Multiple Access/Collision Detect. The Medium Access Control (MAC) protocol used in Ethernet.

Data Rate

The speed of the data transmission, measured in bps (bits per second) or Mbps.

Duplex (Full, Half)

Full duplex is a communications method that allows for the simultaneous transmission and reception of data. In Half Duplex communication, transmissions and receptions can occur in either direction but not at the same time.

Ethernet

The most common network protocol in use. A protocol is a set of rules enabling data communications. Ethernet can operate over several different media including fiber optic, coaxial cable and twisted-pair cabled in Ethernet transmissions.

IEEE 802.3

IEEE Working Group for CSMA/CD, the protocol used in Ethernet transmissions.

IGMP Snooping

The ability of a switch to observe Internet Group Multicast Protocol (IGMP) traffic in order to learn IP Multicast group membership. The purpose is to restrict multicast transmissions to only those ports which have requested them.

LAN

Local Area Network. A network of directly-connected machines (located in close proximity), providing high speed communication over physical media such as fiber optics or twisted pair wiring.

MAC Address

A unique address assigned to a station interface, identifying that station on the network. With Ethernet, this is the unique 48-bit station address. Same as the physical address.

Megabit (Mb)

Megabit. One million bits of information, usually used to express a data transfer rate ; 1 Megabit/second = 1Mbps.

Megabyte (MB)

MegaByte. A unit of data storage size which represents one million characters of information.

Multicast

A transmission initiated by one station to many stations of the network.

Port Mirroring

Port mirroring allows a switch port to monitor packets from any or all of its ports so that traffic can be analyzed.

Quality of Service (QoS)

Some switches support QoS (per 802.1 p and 802.10 standards) whereby messages can be assigned levels of priority. QoS is important where time-critical applications can be impaired by data delays.

RJ45

8-position modular jacks used on twisted pair links for Ethernet cabling.

RJ-Field

A wide range of connectors which allow to reinforce and seal standard RJ45 cable. See www.rjfield.com

SNMP

Simple Network Management Protocol. This is THE standard used for switch management programs.

Spanning Tree Protocol (STP)

A link management protocol providing path redundancy and preventing network loops by defining a tree to span all switches in a network. It forces redundant data paths into a standby (blocked) state. If a path malfunction occurs, the topology is reconfigured and the link reestablished by activating the standby path.

TCPIP

Transmission Control Protocol/Internet Protocol. A set of protocols, resulting from ARPA efforts, used by the Internet to support services such as remote login (TELNET), file transfer (FTP) and mail (SMTP).

TELNET

The Internet standard protocol for remote login (terminal connection) service. TELNET allows a user at one site to interact with a remote timesharing system at another site as if the user's terminal were connected directly to the remote computer.

VLAN

Virtual Local Area Network. A LAN that maps stations on a basis other than location such as by department, user type or application. Managing traffic, workstations, and bandwidth can be easier with a VLAN and improve network efficiency.

10BASE-T

10 Mbps Ethernet on twisted-pair (Category 3) cable.

100BASE-T

The twisted pair version of 100 Mbps Ethernet. Requires Category 5 cabling.

1000BASE-T

A recent LAN standard for implementing 1000 Mbps Ethernet on Category 5 cable. Also called Gigabit Ethernet.