

# Glossary

## EIA

Electronic Industries Alliance. A trade organization of manufacturers which set standards for use of its member companies. Many associations fall under the umbrella of EIA, though it has recently been absorbed by the TIA, or Telecommunications Industry Association. See [www.eia.org](http://www.eia.org) or [www.tiaonline.org](http://www.tiaonline.org).



## EIA/TIA

Electronics Industry Association/  
Telecommunications Industry Association.

## ELFEXT

Equal Level Far End Crosstalk. A measure of FEXT which accounts for the attenuation of the cabling system.

## Electromagnetic Interference (EMI)

The interference in signal transmission or reception caused by the radiation of electrical and magnetic fields.

## Equipment

As distinguished from Device. Telecom equipment (computers, phones, faxes, etc.) plugs into telecommunications outlets or devices. See also Device.

## Ethernet

Type of local area network used for connecting computers, printers, workstations, terminals, etc. within the same building. Ethernet is a physical link and data link protocol that operates over twisted pair wire and over coaxial cable at speeds up to 10Mbps.

## Far End Crosstalk (FEXT)

An electromagnetic interference (EMI), a type of crosstalk, introduced on UTP by close-by wires, usually running in parallel with the FEXT induced wire. "Far End" refers to the inductance of EMI in the end further from the end being measured on the alternate wire in a pair.

## F Connector

A common coaxial connector used for video applications (CATV).

## FEXT

Far End Crosstalk. Unwanted noise coupled onto a receive pair from a transmit pair at the far end of the system.



## Fiber Optics

A technology in which light beams are used to transport digital information from one point to another via thin filaments of glass. Benefits include the ability to transmit enormous amounts of data over long distance, high bandwidth, relatively low cost, low power consumption, small space needs, total insensitivity to electromagnetic interference, and excellent security control.

## Gigabit

When used to describe data transfer rates, it refers to 10 to the 9th power (1,000,000,000) bits. Gigabit Ethernet, abbreviated GbE, supports data transfer rates of 1 Gigabit (1,000 megabits) per second. The first Gigabit Ethernet standard (802.3z) was ratified by the IEEE 802.3 Committee in 1998.

## Gigabit Ethernet

The newest and fastest version of Ethernet. Data rate is 1000 Mbps or 1 Gigabit per second.

## Headroom (Also called Overhead or Margin)

The number of decibels by which a system exceeds the minimum defined requirements. The benefit of headroom is that it reduces the bit error rate (BER), and provides a performance 'safety net' to help ensure that current and future high speed applications will run at peak accuracy, efficiency and throughput.

## Home Run

Telephone system wiring where the individual cables run from each telephone directly back to the central switching equipment. Home run cabling can be thought of as "star" cabling. Every cable radiates out from the central equipment. See also Star Wiring, Daisy Chain.

## Horizontal Cabling

Includes the work area outlet, distribution cable and connecting hardware in the telecom closet.

## Hub

Network device, usually in the telecom closet, that stations connect to.

## IDC (Insulation Displacement Connection)

A type of wire termination where wire is "punched down" into a metal holder which cuts into the insulation wire and makes contact with the conductor, causing the electrical connection to be made.

## IDF (Intermediate Distribution Frame)

A metal rack designed to connect cables located in an equipment room or closet. Consists of components that provide the connection between inter-building cabling and the intra-building cabling, i.e. between the Main Distribution Frame (MDF) and individual telephone wiring. There's usually a permanent, large cable running between the MDF and IDF. The changes in wiring are done at the IDF.

## IEEE

Institute of Electrical and Electronics Engineers. Develops Local Area Network standards and Metropolitan Area Network standards.

## Impedance

The total opposition (i.e. resistance and reactance) a circuit offers to the flow of alternating current. It is measured in ohms, and the lower the ohmic value, the better the quality of the conductor.

## Insertion Loss

The difference in the amount of power received before and after something is inserted into the circuit. In optical fiber, insertion loss is the optical power loss due to all causes, usually expressed as decibel/kilometer.

## Interconnect

A circuit administration point, other than a cross-connect or an information outlet, that provides capability for routing and rerouting circuits. It does not use patch cords or jumper wires, and typically is a jack-and-plug device used in smaller distribution arrangements or that connects circuits in large cables to those in smaller cables.