

ADAPTER

A device that enables, any or all of the following:
1) different sizes of types of plugs to mate with one another or to fit into a telecommunications outlet,
2) the rearrangement of leads, 3) large cables with numerous wires to fan out into smaller groups of wires, and 4) interconnection between cables.

AMP

A trademark of AMP Incorporated.

ATTENUATION

A reduction in strength or deterioration of electrical signal as it passes through a transmission medium. Attenuation generally increases with frequency, cable length and the number of connections in a circuit. Attenuation is measured in decibels (dB). In optical fiber, a diminution of the signal as a function of length traveled.

AWG (American Wire Gauge)

A unit of measure used to describe the cross sectional area of a conductor.

BACKBONE

Generally, the more permanent part of a communications network which carries the heaviest traffic.

BALUN (BALanced UNbalanced)

An impedance matching transformer that converts the impedance of one interface to the impedance of another interface. Generally used to connect balanced twisted pair cabling with unbalanced coaxial cabling.

BANDWIDTH

The size of a transmission technique channel. The difference, expressed in hertz, between the highest and lowest frequencies in a band.

BAUD

A measurement of the signaling speed of a data transmission device.

BIT/S (BPS)

Bits per second. A measure of speed or data rate.

BNC

A bayonet-locking connector used to terminate coaxial cables. BNC is an acronym for Bayonet-Neill-Concelman.

BRIDGE

1. To connect one circuit or component to another in parallel. When two single line phones share the same line they are said to be "bridged". 2. The interconnection or equipment used between two networks using the same communication protocols, transmission methods and addressing structure. Compare with gateway, which connects LANs using different protocols.

BUS

1. A data path shared by many devices. 2. A linear network topology in which all workstations are connected to a single cable. On a bus network such as Ethernet, all workstations receive all transmissions; only the workstation that the information is addressed to will use the information. Contrast with ring and star.

BYTE

A collection of bits operated upon as a unit, usually 8 bits long. Often used to represent one character. Also used to measure the capacity of storage devices. (1K byte = 1024 bytes)

CAPACITANCE

The property of a system of conductors and dielectrics that permits the storage of electrically separated charges when potential differences exist between the conductors.

CATV (Community Antenna Television)

A method of delivering high quality television reception by transmitting signals from a central antenna throughout the community, via coaxial cable. CATV is a broadband transmission facility which generally uses a 75 Ohm coaxial cable to carry numerous frequency-divided TV channels simultaneously.

CIRCUIT

1. (Communications) A bidirectional communications path between two pieces of associated equipment. 2. (Power) An arrangement of conductors, devices, and utilization equipment (loads) such that current will pass through them.

CLADDING

The material surrounding the core of a fiber optic cable. The cladding must have a lower index of refraction than the core in order to contain the light in the core.

COAXIAL CABLE

A type of communication transmission cable in which a solid center conductor is surrounded by an insulating spacer which in turn is surrounded by a tubular outer conductor (usually a braid, foil, or both). The entire assembly is then covered with an insulating and protective outer layer. Coaxial cables have a wide bandwidth and can carry many data, voice, and video conversations simultaneously.

CONDUIT

A rigid or flexible metallic or nonmetallic raceway of circular cross section in which cables are housed for protection and to prevent burning cable from spreading flames or smoke in the event of fire.

CORE

The central region of an optical fiber through which light is transmitted.

CROSS CONNECT

A facility enabling the termination of cable elements and their interconnection, and/or cross-connection, primarily by means of a patch cord or jumper.

CROSSTALK

The phenomenon in which a signal transmitted on one circuit or channel of a transmission system creates an undesired effect in another circuit of channel, generally related to wire placement, shielding, and transmission techniques.

DATA HIGHWAY PLUS & DH+

A registered trademark of Allen-Bradley Company, Inc.

DECIBEL (dB)

A unit for measuring the relative strength of a signal. Usually expressed as the logarithmic ratio of the strength of a transmitted signal to the strength of the original signal.

DECNET

Digital Equipment Corporation's (DEC) proprietary Ethernet LAN that allows interconnection of DEC equipment.

DEMARICATION

A point at which two services may interface and identify the division of responsibility, such as the point of interconnection between telephone company facilities and the user's terminal equipment.

DIELECTRIC

A material that is nonmetallic and nonconductive. Generally used to describe the insulating material surrounding the center conductor of a coaxial cable.

DUPLEX

1. (data communications) A circuit used to transmit signals simultaneously in both directions.
2. (general) Two receptacles or jacks in a common housing which accept 2 plugs.

EMI/RFI (Electromagnetic Interference/Radio Frequency Interference)

The interference in signal transmission or reception resulting from the radiation of Frequency Interference undesirable electrical or magnetic and electrical fields.

ETHERNET

A baseband local area network used for connecting computers and terminals, etc., within the same building. Ethernet was marketed (and trademarked) by Xerox and developed jointly by Digital Equipment Corporation, Intel, and Xerox. It is the basis for the IEEE Standard 802.3.

FIBER OPTICS

The technology in which communication signals in the form of modulated light beams are transmitted over a glass fiber transmission medium. Fiber optic technology offers high bandwidth, small space needs, and protection from electromagnetic interference, eavesdropping, and radioactivity.

GHz (GigaHertz)

A unit of frequency equal to one billion Hertz.

Hz (Hertz)

A unit of frequency equal to one cycle per second.

HOME RUN

A pathway or cable between two locations without a point of access in between.

HUB

Provides connections to and from multiple network devices. Also known as a concentrator.

IBM, SYSTEM/3X and AS/400

Registered trademarks of International Business Machines Corporation.

IMPEDANCE

A unit of measure, expressed in Ohms, of the total opposition (resistance, capacitance, and inductance) offered to the flow of an alternating current.)

INTERFACE

1. A shared boundary. A physical point of demarcation between two devices where the electrical signals, connectors, timing, and handshaking are defined. 2. The procedures, codes, and protocols that enable two entities to interact for a meaningful exchange of information.

INTERMEDIATE CROSS-CONNECT (IC)

A cross-connect between 1st level and 2nd level backbone cabling.

ISDN

A CCITT Standard, currently under development, that will cover a wide range of data communication issues, but primarily the total integration of voice and data. Already having major effects on exchange and multiplexer design.

JUMPER

An assembly of twisted pairs without connectors, used to join telecommunications circuits/links at the cross-connect.

LED (Light Emitting Diode)

A semiconductor diode which emits light when a current is passed through it. In lightwave transmission systems, LEDs or lasers are used as light sources.

LINK

The communications circuit or transmission path connecting two points, not including terminal equipment, work area cables, and equipment cables.

LOCAL AREA NETWORK (LAN)

A set of Personal Computers and peripheral devices, such as printers and CD-Rom drives, connected together in a defined, limited geographic area.

MAIN CROSS-CONNECT (MC)

A cross connect for first level backbone cables, entrance cables, and equipment cables.

MHz (Mega Hertz)

A unit of frequency equal to one million Hertz.

METROPOLITAN AREA NETWORK (MAN)

An extended LAN operating within a metropolitan area and provides an integrated set of services for a real-time data, voice, and image transmission.

MICRON

A unit of length equal to one millionth of a meter. (.000001 meter). Short for micrometer.

MIPS

Millions of instructions per second. A measure of processing power.

MODEM (MOdulator DEModulator)

A device which converts digital signals to analog signals (and vice-versa) for transmission over the telephone network, which usually is analog.

MULTIMODE OPTICAL FIBER

An optical fiber that will allow many bound modes to propagate. The fiber may be either a grade-index or step-index fiber.

NETWORK

An interconnection of computer systems, terminals, or data communications facilities.

NETWORK INTERFACE

The point of interconnection between telephone company communications facilities and terminal equipment, protective apparatus, or wiring at a subscribers's premises.

NODE

In general, any point of interconnection to a network where service is provided, used, or communication channels are interconnected.

PATCH PANEL

A cross-connect system of mateable connectors that facilitates administration.

PINOUT

Pin configurations for cabling.

PLENUM

An air duct inside buildings through which cables can be pulled or housed.

PORT

A functional unit of a node through which data can enter or leave a data network.

REPEATER

A network device used to repeat signals from one cable to another.

RISER

The conduit or path between floors of a building into which telephone and other utility cables are placed to bring service from one floor to another.

ROUTER

A network device used to channel messages from one cable link to another.

ST

Designation for the "straight tip" connector developed by AT&T. This optical connector features a physically contacting non-rotating 2.5mm ferrule design and bayonet connector-to-adapter mating.

SUBMINIATURE D CONNECTOR

A family of multipin data connectors used in RS232-C communications. The connectors are available in 9, 15, 25, 37, and 62 pin configurations. DB-9 has 9 pins and is used for Token-ring and serial connections. DB-15 has 15 pins and is used for Ethernet transceivers. DB-25 has 25 pins and is used for parallel or serial connections.

STAR TOPOLOGY

Network devices are connected to a central hub like the points on a star.

THIN ETHERNET

An Ethernet LAN or IEEE 802.3 LAN which uses smaller diameter coaxial cable than standard Ethernet.

TNC

A Threaded connector used to terminate coaxial cables. TNC is an acronym for threaded Neill-Concelman.

TOKEN

A unique combination of bits used in LANs to grant permission to a station to transmit. In a ring network, the token circulates continuously; in a bus it must be addressed.

TOPOLOGY

The geometric description of the physical or logical connections of a telecommunications system. Typically described as bus, ring, or star.

TRANSIENT

An abrupt change in voltage, of short duration, which may cause signal impairments, loss of memory, or physical damage to equipment.

TRUNK CABLE

The main cable used in traditional Ethernet environments.

TWINAXIAL CABLE

A type of communication transmission cable consisting of two center conductors surrounded by an insulating spacer which in turn is surrounded by a tubular outer conductor (usually a braid, foil, or both). The entire assembly is then covered with an insulating and protective outer layer.

TWISTED PAIR CABLE

A type of communication transmission cable in which two individually insulated wires are twisted around each other to reduce induction (thus interference) from one wire to the other. The pair may be surrounded by a shield, insulating jacket, or an additional pair of wires.

WANG

A registered trademark of Wang Laboratories.

WIDEBAND

A communications channel or medium having a bandwidth sufficient to carry multiple voice/video or data signals simultaneously.

WIRING CLOSET

A termination point for customer premise wiring designed to offer access to service personnel.