



GLOSSARY

Symbols

10Base-T	10-Mbps baseband Ethernet specification using two pairs of twisted-pair cabling (Category 3, 4, or 5): one pair for transmitting data and the other for receiving data. 10Base-T, which is part of the IEEE 802.3 specification, has a distance limit of approximately 328 feet (100 meters) per segment.
100Base-T	100-Mbps baseband Fast Ethernet specification using UTP wiring. Like the 10Base-T technology on which it is based, 100Base-T sends link pulses over the network segment when no traffic is present. However, these link pulses contain more information than those used in 10Base-T. The 100Base-T specification is based on the IEEE 802.3 standard.
802.x	IEEE standards for the definition of LAN protocols.
1000Base-LX/LH	1000-Mbps Gigabit Ethernet specification using two strands of multimode or single-mode fiber-optic cable per link. To guarantee proper signal recovery, a 1000Base-LX/LH link cannot exceed 1804 feet (550 meters) in length over multimode fiber or 32,810 feet (10 km) in length over single-mode fiber. Based on the IEEE 802.3 standard with reach over single-mode fiber extended from 5 km to 10 km.
1000Base-SX	1000-Mbps Gigabit Ethernet specification using two strands of multimode fiber-optic cable per link. To guarantee proper signal recovery, a 1000Base-SX link cannot exceed 1804 feet (550 meters) in length. The 1000Base-SX specification is based on the IEEE 802.3 standard.
1000Base-X	1000-Mbps Gigabit Ethernet specification that refers to the 1000Base-ZX, 1000Base-SX, and 1000Base-LX standards for gigabit Ethernet over fiber-optic cabling. The 1000Base-X specification is based on the IEEE 802.3 standard.
1000Base-ZX	1000-Mbps Gigabit Ethernet specification using two strands of single-mode fiber-optic cable per link. To guarantee proper signal recovery, a 1000Base-ZX link cannot be longer than 62.1 miles (100 km). This is a Cisco specification.

A

AAA server	Authorization, authentication, and accounting server.
AGC	Automatic gain control
Alarm	A status condition that shows that a module or port is experiencing an abnormal operating condition. See also Critical alarm , Major alarm , and Minor alarm .

AS/NZS Australia/New Zealand.

ATM Asynchronous Transfer Mode. International standard for cell relay in which multiple service types (such as voice, video, or data) are conveyed in fixed-length (53-byte) cells. Fixed-length cells allow cell processing to occur in hardware, thereby reducing transit delays. ATM is designed to take advantage of high-speed transmission media such as E3, SONET, and T3.

B

BER Bit error rate.

C

CATV Cable television. References to headend or distribution hub.

CBR Constant bit rate.

CCITT Consultative Committee for International Telegraph and Telephone. International organization responsible for the development of communications standards. Now called the ITU-T. (See [ITU-T](#).)

CCS Common channel signaling.

CES Circuit emulation service.

Chrominance The color portion of a video signal.

CMTS Cable modem termination system, such as the Cisco uBR7246VXR router.

C/N ratio Carrier-to-noise ratio.

CNR Cisco Network Registrar.

CPE Customer premises equipment.

Critical alarm An alarm condition that might affect most or all subscribers that connect to the reporting node. To obtain more information about a problem, use the **show facility-alarm status** command. See also [Major alarm](#) and [Minor alarm](#).

CSRC Cisco Subscriber Registration Center.

CSU/DSU Channel service unit/data service unit.

CTS Clear To Send.

D

DCD Data carrier detect.

DCE	Data circuit-terminating equipment (ITU-T expansion). Devices and connections of a communications network that comprise the network end of the user-to-network interface. The DCE provides a physical connection to the network, forwards traffic, and provides a clocking signal used to synchronize data transmission between DCE and DTE devices. Modems and interface cards are examples of DCE. Compare with DTE .
DHCP	Dynamic Host Configuration Protocol.
DNS	Domain Name System.
DOCSIS	Data-over-Cable Service Interface Specification.
DSR	Data set ready.
DSU	Data Service Unit. Device used in digital transmission that adapts the physical interface on a DTE device to a transmission facility such as T1 or E1. The DSU is also responsible for such functions as signal timing. Often used with CSU, as in CSU/DSU.
DTE	Data terminal equipment. Device at the user end of a user-network interface that serves as a data source, destination, or both. DTE connects to a data network through a DCE device (for example, a modem) and typically uses clocking signals generated by the DCE. DTE includes devices such as computers, protocol translators, and multiplexers.

E

EIA	Electronic Industries Alliance.
EIA/TIA-232-E	The latest version of the RS-232-C serial data transfer standard. This standard defines the serial ports on computers, which communicate with external modems, and so on.
EMI	Electromagnetic interference.
EPROM	Erasable programmable read-only memory.
ESD	Electrostatic discharge.
EuroDOCSIS	European Data-over-Cable Service Interface Specifications.

F

Fast Ethernet	Any of a number of 100-Mbps Ethernet specifications. Fast Ethernet offers a speed increase 10 times that of the 10Base-T Ethernet specification, while preserving qualities such as frame format, MAC mechanisms, and MTU. Existing 10Base-T applications and network management tools can be used on Fast Ethernet networks. The Fast Ethernet specification is based on an extension to the IEEE 802.3 specification.
FEC	Forward error correction.
FER	Frame error rate.

Flash memory	Nonvolatile storage that can be electrically erased and reprogrammed so that software images can be stored, booted, and rewritten as necessary. Flash memory was developed by Intel and is licensed to other semiconductor companies
Frame relay	Industry-standard, switched data link layer protocol that handles multiple virtual circuits using HDLC encapsulation between connected devices. Frame Relay is more efficient than X.25, the protocol for which it is generally considered a replacement.
FRU	Field replaceable unit. A component that can be removed from a network device and replaced in the field. Line cards, power modules, and fan modules are typically FRUs.

G

GBIC	Gigabit Ethernet converter. An interface module used by gigabit Ethernet and Fibre Channel to convert the serial electrical signals to the transmission medium's physical layer signalling, which is typically optical. GBIC modules can be hot-swapped and contain ID and system information that a switch or router can use to determine the network device's capabilities. Different GBICs handle different types of fiber cable. See 1000Base-LX/LH , 1000Base-SX , and 1000Base-ZX .
GPS	Global positioning system.

H

H.323 VoIP network	Protocol that supports VoIP.
HDLC	High-Level Data Link Control.
HFC	Hybrid fiber-coaxial.
HRC	Harmonic related carrier.
HSSI	High-Speed Serial Interface.

I

IEC	International Electrotechnical Commission.
IEEE 802.3	IEEE LAN protocol that specifies an implementation of the physical layer and the MAC sublayer of the data link layer. IEEE 802.3 uses CSMA/CD access at a variety of speeds over a variety of physical media. Extensions to the IEEE 802.3 standard specify implementations for Fast Ethernet and gigabit Ethernet.
IRC	Incremental Related Carrier. Defined in DOCSIS specification, IS-6, North American frequency plans.
ITU-T	International Telecommunication Union-Telecommunications Standardization Sector.

- ITU-T J.83 Annex A** Series J.83 deals with the transmission of television, sound programming, and other multimedia signals. Annex A defines the management interface between the customer premise equipment and the Frame Relay network for European channel plans.
- ITU-T J.38 Annex B** Series J.38 deals with the transmission of television, sound programming, and other multimedia signals. Annex B defines the management interface between the customer premise equipment and the Frame Relay network for North American channel plans.

J

- JATE** Japanese Approvals Institute for Telecommunications Equipment—Equivalent to FCC part 68 certification.

M

- MAC** Media Access Control.
- Major alarm** One of a group of alarm conditions that are considered the second most severe of all reportable alarms. Major alarms affect several subscribers who connect to the reporting node. You can use the `show facility-alarm status` IOS command to obtain more information about the problem. See also [Critical alarm](#) and [Minor alarm](#).
- MDC** MII data clock.
- MDIO** MII data input/output.
- MER** Modulation error ratio.
- MIGC** Manual IF gain control.
- Minor alarm** One of a group of alarm conditions that are considered the third most severe of all reportable alarms. Minor alarms affect a single or small number of subscribers who connect to the reporting node. You can use the `show facility-alarm status` IOS command to obtain more information about the problem. See also [Critical alarm](#) and [Major alarm](#).
- MMF** Multimode fiber. Optical fiber supporting propagation of multiple frequencies of light.
- MSO** Multiple system operator.

N

- NCTA** National Cable Television Association.
- NEBs** Network Equipment Building Systems. The Telcordia (formerly Bellcore) requirements for equipment deployed in a central office environment. Covers spatial, hardware, crafts person interface, thermal, fire resistance, handling and transportation, earthquake and vibration, airborne contaminants, grounding, acoustical noise, illumination, EMC, and ESD requirements.

NEC	National Electrical Code.
NFPA	National Fire Protection Association 70 (in the United States).
NPE	Network processing engine.
NSE	Network services engine.
NTSC	National Television System Committee.
NVRAM	Nonvolatile random-access memory.

O

OIR	Online insertion and removal.
OTP	One-time programmable.

P

PA	Port adapter.
PAL	Phase alternate line.
PCI	Protocol control information.
PCMCIA	Personal Computer Memory Card International Association.

Q

QAM	Quadrature amplitude modulation. A modulation technique using variations in simple amplitude.
QPSK	Quaternary phase shift keying. A compression technique used in modems and wireless networks.

R

RG-59	59-series headend coaxial cable.
RTS	Request to send.

S

SDH	Synchronous Digital Hierarchy.
SDRAM	Synchronous dynamic random-access memory.

SECAM	SEquential CouLOUR Avec Memoire.
SELV	Safety extra-low voltage.
SGCP	Simple Gateway Control Protocol.
SIMM	Single in-line memory module.
SMF	Single-mode fiber. Fiber-optic cabling with a narrow core that allows light to enter only at a single angle. Such cabling has higher bandwidth than multimode fiber, but requires a light source with a narrow spectral width (for example, a laser). Also called monomode fiber.
SONET	Synchronous Optical Network. High-speed synchronous network specification developed by Bellcore and designed to run on optical fiber. STS-1 is the basic building block of SONET. It was approved as an international standard in 1988.
SR	Short reach. SONET/SDH specification for transmit power and receive sensitivity that achieves a 1.2-mile (2 km) reach.
SRAM	Static Random-Access Memory.
SRP	Spatial reuse protocol.
STB	Set-top box.

T

T1	Digital WAN carrier facility. T1 transmits DS1-formatted data at 1.544 Mbps through the telephone switching network.
T3	Digital WAN carrier facility. T3 transmits DS3-formatted data at 44.736 Mbps through the telephone switching network.
TAC	Technical Assistance Center.
ToD	Time of day.
TFTP	Trivial File Transfer Protocol.
TNV	Telephone-network voltage.

U

UBR	Universal broadband router.
UTP	Unshielded twisted-pair.

V

VLAN	Virtual LAN. A group of devices on one or more LANs that are configured (using management software) so that they can communicate as if they were attached to the same wire, when in fact they are located on a number of different LAN segments. Because VLANs are based on logical instead of physical connections, they are extremely flexible.
VoIP	Voice over IP.
VPN	Virtual private network.
VXR	Voice Extension Ready.

W

WAN	Wide-area network. A data communications network that serves users across a broad geographic area and often uses transmission devices provided by a common carrier (such as a telephone company or service provider).
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X

X-level test point	A test point that is established by inserting a test signal of known amplitude into a fiber node and then measuring the output level amplitude at the headend optical receiver.
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