

Layer 1 (**Physical Layer**) Bitübertragungsschicht

- Telephone network [modems](#)
- [IrDA](#) Infrared Data Association, Personal Area Network (PAN)
- [USB](#) physical layer, IEEE 1394, IEEE 802.3af,
- [EIA RS-232](#), [EIA-422](#), [EIA-423](#), [RS-449](#), [RS-485](#)
- [Ethernet physical layer 10BASE-T](#), [10BASE2](#), [10BASE5](#), [100BASE-TX](#), [100BASE-FX](#), [100BASE-T](#), [1000BASE-T](#), [1000BASE-SX](#) and other varieties
- Varieties of [802.11 Wi-Fi](#) physical layers
- [DSL](#) Digital subscriber line
- [ISDN](#) Integrated Services Digital Network
- T1 and other [T-carrier](#) links, and E1 and other [E-carrier](#) links
- [ITU](#) Telecommunication Standardization Sector, ITU-T, [X.509](#), [Y.3172](#), [Y.3173](#), [H.264/MPEG-4 AVC](#)
- [IEEE 1394 interface](#) Apple, Sony, Panasonic,...1986; 35 years ago[
- [TransferJet](#) Sony, PPP Point-to-Point Protocol
- [Etherloop](#) DSL-Ethernet-Combination
- [ARINC 818](#), [ADVB](#) Avionics Digital Video Bus (high performance digital video)
- [G.hn/G.9960](#) physical layer 2 GBits Home Networks
- [CAN bus](#) (controller area network) physical layer - vehicle bus standard
- [Mobile Industry Processor Interface](#) physical layer
- [Infrared](#), electromagnetic radiation (EMR)
- Frame Relay, X.25, GSM, Mobilephones
- FO Fiber optics

Layer 2 (**Data Link Layer**) Sicherungsschicht

- ◇ [ARCnet](#) Attached Resource Computer NETwork (1980's)
- ◇ [ARP](#) Address Resolution Protocol
- ◇ [ATM](#) Asynchronous Transfer Mode, [telecommunications](#) standard by [ANSI](#) and [ITU](#) (formerly CCITT)
- ◇ [CHAP](#) Challenge Handshake Authentication Protocol, PPP Point-to-Point Protocol
- ◇ [CDP](#) Cisco Discovery Protocol, [Cisco Systems](#) (1994), On-Demand Routing
- ◇ [DCAP](#) Data Link Switching Client Access Protocol
- ◇ [Distributed Multi-Link Trunking](#)
- ◇ [Distributed Split Multi-Link Trunking](#)
- ◇ DTP [Dynamic Trunking Protocol](#)
- ◇ [Econet](#) LAN used by Schools and small Buisnesses
- ◇ [Ethernet](#) IEEE 802
- ◇ [FDDI](#) Fiber Distributed Data Interface
- ◇ Frame Relay, X.25, GSM, Mobilephones
- ◇ [ITU-T G.hn Data Link Layer](#)
- ◇ [HDLC](#) High-Level Data Link Control
- ◇ [IEEE 802.11](#) WiFi
- ◇ [IEEE 802.16](#) WiMAX
- ◇ [LACP](#) Link Aggregation Control Protocol
- ◇ [LattisNet](#), SynOptics 1980s
- ◇ [LocalTalk](#), Old Apple Computers..
- ◇ [L2F](#) Layer 2 Forwarding Protocol
- ◇ [L2TP](#) Layer 2 Tunneling Protocol
- ◇ [LLDP](#) Link Layer Discovery Protocol
- ◇ [LLDP-MED](#) Link Layer Discovery Protocol - Media Endpoint Discovery
- ◇ [MAC](#) Media Access Control
- ◇ [Q.710](#) Simplified [Message Transfer Part](#)
- ◇ [Multi-link trunking](#) Protocol
- ◇ [NDP](#) Neighbor Discovery Protocol
- ◇ [PAgP](#) - Cisco Systems proprietary link aggregation protocol
- ◇ [PPP](#) Point-to-Point Protocol
- ◇ [PPTP](#) Point-to-Point Tunneling Protocol
- ◇ [PAP](#) Password Authentication Protocol
- ◇ [RPR](#) IEEE 802.17 Resilient Packet Ring

- ◇ [SLIP](#) Serial Line Internet Protocol (obsolete)
- ◇ [StarLAN](#), First IEEE 802.3 Standard, 1BASE5 Version of Ethernet
- ◇ Space Data Link Protocol, one of the norms for Space Data Link from the [Consultative Committee for Space Data Systems](#)
- ◇ [STP](#) Spanning Tree Protocol
- ◇ [Split multi-link trunking](#) Protocol
- ◇ [Token Ring](#) a protocol developed by IBM; the name can also be used to describe the [token passing](#) ring logical topology that it popularized.
- ◇ [Virtual Extended Network \(VEN\)](#) a protocol developed by iQuila.
- ◇ [VTP](#) VLAN Trunking Protocol
- ◇ [VLAN](#) Virtual Local Area Network

Network Topology

- ◇ [Asynchronous Transfer Mode](#) (ATM)
- ◇ [IS-IS](#), Intermediate System - Intermediate System (OSI)
- ◇ [SPB](#) Shortest Path Bridging
- ◇ [MTP](#) Message Transfer Part
- ◇ [NSP](#) Network Service Part

Layer 2.5

- ◇ [ARP](#) Address Resolution Protocol
- ◇ [MPLS](#) Multiprotocol Label Switching
- ◇ [PPPoE](#) Point-to-Point Protocol over Ethernet
- ◇ [TIPC](#) Transparent Inter-process Communication

Layer 3 ([Network Layer](#)) Vermittlungsschicht

- ◇ [CLNP](#) Connectionless Networking Protocol
- ◇ [IPX](#) Internetwork Packet Exchange
- ◇ [NAT](#) Network Address Translation
- ◇ [Routed-SMLT](#), High Speed Link between Routers and Switches, etc
- ◇ [SCCP](#) Signalling Connection Control Part
- ◇ AppleTalk DDP
- ◇ [HSRP](#) Hot Standby Router protocol
- ◇ [VRRP](#) Virtual Router Redundancy Protocol
- ◇ IP [Internet Protocol](#)
- ◇ [ICMP](#) Internet Control Message Protocol
- ◇ [ARP](#) Address Resolution Protocol
- ◇ RIP [Routing Information Protocol](#) (v1 and v2)
- ◇ OSPF [Open Shortest Path First](#) (v1 and v2)
- ◇ IPSEC [IPsec](#)

Layer 3+4 (Protocol Suites)

- ◇ [AppleTalk](#)
- ◇ [DECnet](#), Digital Equipment Corporation 1975
- ◇ [IPX/SPX](#) Internetwork Packet Exchange/Sequenced Packet Exchange 1983
- ◇ [Internet Protocol Suite](#), conceptional Model, TCP/IP
- ◇ [Xerox Network Systems](#) (XNS, 1977)

Layer 4 ([Transport Layer](#)) Transportschicht

- ◇ [AEP](#) AppleTalk Echo Protocol
- ◇ [AH](#) Authentication Header over IP or IPsec
- ◇ [DCCP](#) Datagram Congestion Control Protocol
- ◇ [ESP](#) Encapsulating Security Payload over IP or IPsec
- ◇ [FCP](#) Fibre Channel Protocol
- ◇ [NetBIOS](#) NetBIOS, File Sharing and Name Resolution
- ◇ [IL](#) Originally developed as transport layer for [9P](#)
- ◇ [iSCSI](#) Internet Small Computer System Interface
- ◇ [NBF](#) NetBIOS Frames protocol

- ◇ [SCTP](#) Stream Control Transmission Protocol
- ◇ [Sinec H1](#) for telecontrol
- ◇ [TUP](#), Telephone User Part
- ◇ [SPX](#) Sequenced Packet Exchange
- ◇ [NBP](#) Name Binding Protocol {for AppleTalk}
- ◇ TCP [Transmission Control Protocol](#)
- ◇ UDP [User Datagram Protocol](#)

Layer 5 ([Session Layer](#)) Sitzungsschicht

This layer, presentation Layer and application layer are combined in [TCP/IP model](#).

- ◇ [9P](#) Distributed file system protocol developed originally as part of [Plan 9](#)
- ◇ ADSP AppleTalk Data Stream Protocol
- ◇ ASP AppleTalk Session Protocol
- ◇ [H.245](#) Call Control Protocol for Multimedia Communications
- ◇ [iSNS](#) Internet Storage Name Service
- ◇ [NetBIOS](#), File Sharing and Name Resolution protocol - the basis of file sharing with Windows.
- ◇ [NetBEUI](#), NetBIOS Enhanced User Interface
- ◇ [NCP](#) NetWare Core Protocol
- ◇ [PAP](#) Printer Access Protocol
- ◇ [RPC](#) Remote Procedure Call
- ◇ [RTCP](#) RTP Control Protocol
- ◇ [SDP](#) Sockets Direct Protocol
- ◇ [SMB](#) Server Message Block
- ◇ [SMPP](#) Short Message Peer-to-Peer
- ◇ [SOCKS](#) "SOCKeT5", exchanges network packets between a client and server through a proxy
- ◇ [ZIP](#) Zone Information Protocol {For AppleTalk} This layer provides session management capabilities between hosts. For example, if some host needs a password verification for access and if credentials are provided then for that session password verification does not happen again. This layer can assist in synchronization, dialog control and critical operation management (e.g., an online bank transaction).

Layer 6 ([Presentation Layer](#)) Darstellungsschicht

- ◇ [TLS](#) Transport Layer Security
- ◇ [AFP](#) Apple Filing Protocol, Part of Apple File Services (AFS)
- ◇ [SSL](#) Secure Sockets Layer
- ◇ FTP File Transfer Protocol
- ◇ SSH Secure Shell

Layer 7 ([Application Layer](#)) Anwendungsschicht

- ◇ [SOAP](#), Simple Object Access Protocol, (XML Informations..)
- ◇ SSDP [Simple Service Discovery Protocol](#), A discovery protocol employed by UPnP
- ◇ [TCAP](#), Transaction Capabilities Application Part, Q.771-Q.775, ANSI T1.114
- ◇ UPnP [Universal Plug and Play](#)
- ◇ [DHCP](#) Dynamic Host Configuration Protocol
- ◇ [DNS](#) Domain Name System
- ◇ [HTTP](#) Hypertext-Transfer Protocol
- ◇ [HTTPS](#) Hypertext-Transfer Protocol Secure
- ◇ [NFS](#) Network File System, Microsystems 1984
- ◇ [POP3](#) Post Office Protocol
- ◇ [SMTP](#) Simple Mail Transfer Protocol
- ◇ [SNMP](#) Simple Network Management Protocol
- ◇ [FTP](#) File transfer Protocol
- ◇ [NTP](#) Network Time protocol
- ◇ [IRC](#) Internet Relay Chat
- ◇ [Telnet](#), 1969 beginning with RFC 15
- ◇ [SSH](#) Secure Shell, Introduced 1995, Tatu Ylönen
- ◇ [TFTP](#) Trivial File Transfer Protocol, early stages of nodes booting into LANs
- ◇ [IMAP](#) Internet Message Access Protocol, RFC 3501
- ◇ [Gemini](#) Protocol, Hypertext Informations (with TLS)