802.1D references

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802.1D-2004

- All relevant content from .1D is contained in .1Q
  - IEEE 802.1Q-2018
  - IEEE/ISO/IEC 8802-1Q-2020
- Already withdrawn
  - IEEE 802.1D-1993 – superseded in 1998
  - ISO/IEC 10038:1993 – withdrawn in 1998
  - IEEE 802.1D-1998 – superseded in 2004
  - ISO/IEC 15802-3:1998 – withdrawn in 2019
- Plan to actively withdraw before expiration at end of 2021
  - IEEE 802.1D-2004 *802.1 webpage*
  - Process is simply to initiate an SA ballot on withdrawal following a WG motion

Outstanding references to 802.1D?

- A web search indicates there may be given these hits
  - 1 million total hits
  - ~2000 in IETF RFCs.
  - ~1800 in 3GPP TR & TS.
  - ~200 in IEEE standards.
  - ~100 in CableLabs specs.
  - ~60 in ITU-T Recommendations
  - ~60 in MEF technical standards
  - ~30 in ISO standards
  - 0 in IEC standards
  - …
- These should be studied to ensure no adverse effects from withdrawal
  - Send liaison to originating SDO
  - Should focus on normative references

IEEE 802 standards

Standard	Normative	Informative	Textual	Clauses
IEEE 802-2004	X			4.4, 5.3.2.1, 5.3.2.4, 8.2.4
IEEE 802.1BA-2011			X	5
IEEE 802.1BR-2012		X		6.10.1
IEEE 802.1Q-2018		X		3.250, 17.2.2, 17.2.4, 17.3.2.2, 17.3.2.3, 17.7, G.3, P.1,
IEEE 802.3-2018	X			1.4.163, 1.4.401, 1.4.465, 2.3.1, 2.3.2.5, 31B.1, 31D.1, 64.3.2.3, 67.1, 77.3.2.3, 57A.3
IEEE 802.3.1-2013	X			9.1.1.5, 9.1.2, 9.3.4, 9.6
IEEE 802.11-2016		X		5.1.1.2, 9.4.2.31, 10.2.4.2, 14.11.1, M.4, R.3.3, S.2.1
IEEE 802.11ak-2018			X	3.2, 4.5.3.3, 5.1.1.2, 14.11.1, M.4, R.3.4
IEEE 802.15.3-2016			X	B.3
IEEE 802.16-2017	X			5.3, 11.13.18.3.3.11

- Superseded standards not included

Search URL

IETF Summary

Document	Normative	Informative	Textual
RFC	35	23	25
Internet Draft	0	2	0

- Quick web search was from https://tools.ietf.org/html/ (~2000 results)
- Short Python program searched https://tools.ietf.org/rfc/index
  - Obsoleted RFCs and expired internet drafts not included
  - Determined normative and informative references in the documents

- 85 documents identified
- Some documents have 50 or more appearances of “802.1D”

IETF RFCs – with normative reference

Document Name	Date
RFC 1525 - Definitions of Managed Objects for Source Routing Bridges	September, 1993
RFC 1749 - IEEE 802.5 Station Source Routing MIB using SMIv2	December, 1994
RFC 1795 - Data Link Switching: Switch-to-Switch Protocol AIW DLSw RIG: DLSw Closed Pages, DLSw Standard Version 1	April, 1995
RFC 2024 - Definitions of Managed Objects for Data Link Switching using SMIv2	October, 1996
RFC 2114 - Data Link Switching Client Access Protocol	February, 1997
RFC 2427 - Multiprotocol Interconnect over Frame Relay	September, 1998
RFC 2470 - Transmission of IPv6 Packets over Token Ring Networks	December, 1998
RFC 2475 - An Architecture for Differentiated Services	December, 1998
RFC 2613 - Remote Network Monitoring MIB Extensions for Switched Networks Version 1.0	June, 1999
RFC 2643 - Cabletron's SecureFast VLAN Operational Model	August, 1999
RFC 2764 - A Framework for IP Based Virtual Private Networks	February, 2000
RFC 2814 - SBM (Subnet Bandwidth Manager): A Protocol for RSVP-based Admission Control over IEEE 802-style networks	May, 2000
RFC 2815 - Integrated Service Mappings on IEEE 802 Networks	May, 2000
RFC 2816 - A Framework for Integrated Services Over Shared and Switched IEEE 802 LAN Technologies	May, 2000
RFC 2895 - Remote Network Monitoring MIB Protocol Identifier Reference	August, 2000
RFC 3270 - Multi-Protocol Label Switching (MPLS) Support of Differentiated Services	May, 2002
RFC 3290 - An Informal Management Model for Diffserv Routers	May, 2002
RFC 3422 - Forwarding Media Access Control (MAC) Frames over Multiple Access Protocol over Synchronous Optical Network/Synchronous Digital Hierarchy (MAPOS)	November, 2002
RFC 3488 - Cisco Systems Router-port Group Management Protocol (RGMP)	February, 2003
RFC 3518 - Point-to-Point Protocol (PPP) Bridging Control Protocol (BCP)	April, 2003
RFC 4188 - Definitions of Managed Objects for Bridges	September, 2005
RFC 4318 - Definitions of Managed Objects for Bridges with Rapid Spanning Tree Protocol	December, 2005
RFC 4363 - Definitions of Managed Objects for Bridges with Traffic Classes, Multicast Filtering, and Virtual LAN Extensions	January, 2006
RFC 4389 - Neighbor Discovery Proxies (ND Proxy)	April, 2006
RFC 4541 - Considerations for Internet Group Management Protocol (IGMP) and Multicast Listener Discovery (MLD) Snooping Switches	May, 2006
RFC 4675 - RADIUS Attributes for Virtual LAN and Priority Support	September, 2006
RFC 4762 - Virtual Private LAN Service (VPLS) Using Label Distribution Protocol (LDP) Signaling	January, 2007
RFC 4837 - Managed Objects of Ethernet Passive Optical Networks (EPON)	July, 2007
RFC 4957 - Link-Layer Event Notifications for Detecting Network Attachments	August, 2007
RFC 5171 - Cisco Systems UniDirectional Link Detection (UDLD) Protocol	April, 2008
RFC 5692 - Transmission of IP over Ethernet over IEEE 802.16 Networks	October, 2009
RFC 5777 - Traffic Classification and Quality of Service (QoS) Attributes for Diameter	February, 2010
RFC 6325 - Routing Bridges (RBridges): Base Protocol Specification	July, 2011
RFC 7436 - IP-Only LAN Service (IPLS)	January, 2015
RFC 7727 - Spanning Tree Protocol (STP) Application of the Inter-Chassis Communication Protocol (ICCP)	January, 2016

IETF RFCs – with informative reference

Document Name	Date
RFC 3819 - Advice for Internet Subnetwork Designers	July, 2004
RFC 4664 - Framework for Layer 2 Virtual Private Networks (L2VPNs)	September, 2006
RFC 4665 - Service Requirements for Layer 2 Provider-Provisioned Virtual Private Networks	September, 2006
RFC 4710 - Real-time Application Quality-of-Service Monitoring (RAQMON) Framework	October, 2006
RFC 4712 - Transport Mappings for Real-time Application Quality-of-Service Monitoring (RAQMON) Protocol Data Unit (PDU)	October, 2006
RFC 4761 - Virtual Private LAN Service (VPLS) Using BGP for Auto-Discovery and Signaling	January, 2007
RFC 4840 - Multiple Encapsulation Methods Considered Harmful	April, 2007
RFC 4903 - Multi-Link Subnet Issues	June, 2007
RFC 4947 - Address Resolution Mechanisms for IP Datagrams over MPEG-2 Networks	July, 2007
RFC 4968 - Analysis of IPv6 Link Models for 802.16 Based Networks	August, 2007
RFC 5180 - IPv6 Benchmarking Methodology for Network Interconnect Devices	May, 2008
RFC 5501 - Requirements for Multicast Support in Virtual Private LAN Services	March, 2009
RFC 5556 - Transparent Interconnection of Lots of Links (TRILL): Problem and Applicability Statement	May, 2009
RFC 5695 - MPLS Forwarding Benchmarking Methodology for IP Flows	November, 2009
RFC 6246 - Virtual Private LAN Service (VPLS) Interoperability with Customer Edge (CE) Bridges	June, 2011
RFC 6620 - FCFS SAVI: First-Come, First-Served Source Address Validation Improvement for Locally Assigned IPv6 Addresses	May, 2012
RFC 6748 - Optional Advanced Deployment Scenarios for the Identifier-Locator Network Protocol (ILNP)	November, 2012
RFC 7080 - Virtual Private LAN Service (VPLS) Interoperability with Provider Backbone Bridges	December, 2013
RFC 7133 - Information Elements for Data Link Layer Traffic Measurement	May, 2014
RFC 7348 - Virtual eXtensible Local Area Network (VXLAN): A Framework for Overlaying Virtualized Layer 2 Networks over Layer 3 Networks	August, 2014
RFC 7432 - BGP MPLS-Based Ethernet VPN	February, 2015
RFC 7938 - Use of BGP for Routing in Large-Scale Data Centers	August, 2016
RFC 8466 - A YANG Data Model for Layer 2 Virtual Private Network (L2VPN) Service Delivery	October, 2018

IETF RFCs – with textual mention

Document Name	Date
RFC 1299 - Summary of 1200-1299	January, 1997
RFC 1356 - Multiprotocol Interconnect on X.25 and ISDN in the Packet Mode	August, 1992
RFC 1499 - Summary of 1400-1499	January, 1997
RFC 2099 - Request for Comments Summary RFC Numbers 2000-2099	March, 1997
RFC 2285 - Benchmarking Terminology for LAN Switching Devices	February, 1998
RFC 2467 - Transmission of IPv6 Packets over FDDI Networks	December, 1998
RFC 2899 - Request for Comments Summary RFC Numbers 2800-2899	May, 2001
RFC 3512 - Configuring Networks and Devices with Simple Network Management Protocol (SNMP)	April, 2003
RFC 3599 - Request for Comments Summary RFC Numbers 3500-3599	December, 2003
RFC 3809 - Generic Requirements for Provider Provisioned Virtual Private Networks (PPVPN)	June, 2004
RFC 4149 - Definition of Managed Objects for Synthetic Sources for Performance Monitoring Algorithms	August, 2005
RFC 4504 - SIP Telephony Device Requirements and Configuration	May, 2006
RFC 4663 - Transferring MIB Work from IETF Bridge MIB WG to IEEE 802.1 WG	September, 2006
RFC 4958 - A Framework for Supporting Emergency Telecommunications Services (ETS) within a Single Administrative Domain	July, 2007
RFC 5110 - Overview of the Internet Multicast Routing Architecture	January, 2008
RFC 5154 - IP over IEEE 802.16 Problem Statement and Goals	April, 2008
RFC 6074 - Provisioning, Auto-Discovery, and Signaling in Layer 2 Virtual Private Networks (L2VPNs)	January, 2011
RFC 6221 - Lightweight DHCPv6 Relay Agent	May, 2011
RFC 6850 - Definitions of Managed Objects for Routing Bridges (RBridges)	January, 2013
RFC 6933 - Entity MIB (Version 4)	May, 2013
RFC 7222 - Quality-of-Service Option for Proxy Mobile IPv6	May, 2014
RFC 7561 - Mapping Quality of Service (QoS) Procedures of Proxy Mobile IPv6 (PMIPv6) and WLAN	June, 2015
RFC 8034 - Active Queue Management (AQM) Based on Proportional Integral Controller Enhanced PIE) for Data-Over-Cable Service Interface Specifications (DOCSIS) Cable Modems	February, 2017
RFC 8325 - Mapping Diffserv to IEEE 802.11	February, 2018
RFC 8578 - Deterministic Networking Use Cases	May, 2019

IETF Internet-Drafts – with informative reference

- draft-lee-randomized-macaddr-ps-01 - Problem Statements for MAC Address Randomization

Expires March 26, 2021

- draft-ietf-mpls-rmr-13 - Resilient MPLS Rings

Expires February 13, 2021

3GPP SA2 – with normative reference

Document Name	Date
3GPP TR 23.836	November 2005
3GPP TS 23.234	September 2014

- Search of http://isearch.3gpp.org/ provided ~1800 results
- Most results were different versions (~80) of TS 23.234 which has numerous instances of “802.1D”

CableLabs Summary

Document Type	Normative	Informative	Textual
DOCSIS	8	0	6
DPOE	16	0	0
Other	5	1	1

- Accurate search with 97 documents identified

CableLabs DOCSIS

Doc Type / Title	Date Published	Version	ID	Normative	Informative	Textual
DOCSIS / Business ServicesBusiness Services over DOCSIS Layer 2 Virtual Private Networks	05/28/15	I15	CM-SP-L2VPN	Y	N	NA
DOCSIS / DOCSIS 1.0Cable Modem to Customer Premise Equipment Interface Specification	4/11/2008	C01	CM-SP-CMCI	Y	N	NA
DOCSIS / DOCSIS 1.0DOCSIS Cable Modem Termination System - Network Side Interface Specification	7/12/2017	C01	SP-CMTS-NSI	Y	N	NA
DOCSIS / DOCSIS 1.1Operations Support System Interface Specification	7/9/2005	C01	CM-SP-OSSIv1.1	N	N	Y
DOCSIS / DOCSIS 1.1Radio Frequency Interface Specification	7/9/2005	C01	CM-SP-RFIv1.1	N	N	Y
DOCSIS / DOCSIS 2.0Operations Support System Interface Specification	4/11/2008	C01	CM-SP-OSSIv2.0	N	N	Y
DOCSIS / DOCSIS 2.0Radio Frequency Interface Specification	04/22/09	C02	CM-SP-RFIv2.0	Y	N	NA
DOCSIS / DOCSIS 3.0DOCSIS 3.0 MAC and Upper Layer Protocols Interface Specification	7/12/2017	C01	CM-SP-MULPIv3.0	Y	N	NA
DOCSIS / DOCSIS 3.0DOCSIS 3.0 Operations Support System Interface Specification	7/12/2017	C01	CM-SP-OSSIv3.0	N	N	Y
DOCSIS / DOCSIS 3.0DOCSIS Cable Modem to CPE Interface Specification	10/5/2017	I03	CM-SP-CMCIv3.0	Y	N	NA
DOCSIS / DOCSIS 3.1Cable Modem Operations Support System Interface Specification	10/22/20	I18	CM-SP-CM-OSSIv3.1	N	N	Y
DOCSIS / DOCSIS 3.1DOCSIS 3.1 MAC and Upper Layer Protocols Interface Specification	10/20/20	I21	CM-SP-MULPIv3.1	Y	N	NA
DOCSIS / DOCSIS 4.0Cable Modem Operations Support System Interface Specification	11/3/2020	I02	CM-SP-CM-OSSIv4.0	N	N	Y
DOCSIS / DOCSIS 4.0DOCSIS 4.0 MAC and Upper Layer Protocols Interface Specification	04/29/20	I02	CM-SP-MULPIv4.0	Y	N	NA

CableLabs DPoE

Doc Type / Title	Date Published	Version	ID	Normative	Informative	Textual
DPOE / DPoE 1.0DPoE Demarcation Device Specification	08/30/16	C01	DPoE-SP-DEMARCv1.0	Y	N	NA
DPOE / DPoE 1.0DPoE IP Network Element Requirements	08/30/16	C01	DPoE-SP-IPNEv1.0	Y	N	NA
DPOE / DPoE 1.0DPoE MAC and Upper Layer Protocols Requirements	08/30/16	C01	DPoE-SP-MULPIv1.0	Y	N	NA
DPOE / DPoE 1.0DPoE Metro Ethernet Forum Specification	08/30/16	C01	DPoE-SP-MEFv1.0	Y	N	NA
DPOE / DPoE 1.0DPoE OAM Extensions Specification	08/30/16	C01	DPoE-SP-OAMv1.0	Y	N	NA
DPOE / DPoE 1.0DPoE Operations and Support System Interface Specification	08/30/16	C01	DPoE-SP-OSSIv1.0	Y	N	NA
DPOE / DPoE 1.0DPoE Physical Layer Specification	08/30/16	C01	DPoE-SP-PHYv1.0	Y	N	NA
DPOE / DPoE 1.0DPoE Security and Certificate Specification	08/30/16	C01	DPoE-SP-SECv1.0	Y	N	NA
DPOE / DPoE 2.0DPoE Architecture Specification	02/13/19	I07	DPoE-SP-ARCHv2.0	Y	N	NA
DPOE / DPoE 2.0DPoE IP Network Elements Requirements	02/28/18	I07	DPoE-SP-IPNEv2.0	Y	N	NA
DPOE / DPoE 2.0DPoE MAC and Upper Layer Protocols Interface Specification	02/28/18	I13	DPoE-SP-MULPIv2.0	Y	N	NA
DPOE / DPoE 2.0DPoE Metro Ethernet Forum Specification	02/28/18	I06	DPoE-SP-MEFv2.0	Y	N	NA
DPOE / DPoE 2.0DPoE OAM Extensions Specification	02/13/19	I14	DPoE-SP-OAMv2.0	Y	N	NA
DPOE / DPoE 2.0DPoE Operations and Support System Interface Specification	02/28/18	I12	DPoE-SP-OSSIv2.0	Y	N	NA
DPOE / DPoE 2.0DPoE Physical Layer Specification	02/28/18	I06	DPoE-SP-PHYv2.0	Y	N	NA
DPOE / DPoE 2.0DPoE Security Specification	02/28/18	I06	DPoE-SP-SECv2.0	Y	N	NA

CableLabs / Other

Doc Type / Title	Date Published	Version	ID	Normative	Informative	Textual
DPOG / DPoG 1.0DPoG Architecture Specification	08/30/16	C01	DPoG-SP-ARCHv1.0	Y	N	NA
DPOG / DPoG 1.0DPoG MAC and Upper Layer Protocols Interface Specification	08/30/16	C01	DPoG-SP-MULPIv1.0	Y	N	NA
DPOG / DPoG 1.0DPoG OAM Extensions Specification	08/30/16	C01	DPoG-SP-OAMv1.0	N	Y	NA
VIDEO / HardwareOpenCable Host Home Networking Extension 2.0	05/30/13	I08	OC-SP-HOST-HN2.0	Y	N	NA
VIDEO / Middleware (OCAP)OpenCable Reserved Services Domain Protocols Specification	8/8/2008	I01	OC-SP-RSD-PROT	Y	N	NA
VIRTUALIZATION AND NETWORK EVOLUTION / Open NetworkingVirtual Provisioning Interfaces Technical Report	04/24/17	I01	VNE-TR-VPI	N	N	Y
WIRELESS / WiFiWiFi Requirements for Cable Modem Gateways	05/15/15	I05	WR-SP-WiFi-GW	Y	N	NA

MEF technical standards

Standard	Normative	Informative	Textual
MEF 6.3 – 2019			X
MEF 12.2 – 2014	X		
MEF 17 – 2007	X		
MEF 22.3 – 2018	X		
MEF 40 – 2013	X		
MEF 42 – 2013	X		
MEF 45.1 – 2018	X		
MEF 46 - 2014	X		

Search URL

ITU-T

Study Group	Normative	Informative	Textual
2	2	0	7
9	3	6	3
11	0	1	0
12	0	3	1
13	1	4	1
15	19	5	7
16	2	2	0
	26	**21**	**19**

ITU-T Recommendation Search

https://www.itu.int/net4/ITU-T/search#?collection=ITU-T%20Recommendations

ITU-T SG2

Normative: 2 **Informative: 0** **Textual: 7**

ITU-T Q.838.1 (10/2004): Requirements and analysis for the management interface of Ethernet Passive Optical Networks (EPON)

March, 2005

...ol parameters, physical layers, and management parameters for subscriber access networks. [23] IEEE 802.1D-2004, IEEE standard for local and metropolitan area networks: Media Access Control (MAC) bridges. [...

ITU-T Q.834.4 (07/2003): A CORBA interface specification for Broadband Passive Optical Networks based on UML interface requirements

June, 2004

...ed); The input mACBridgeProfile provides the characteristics for the bridge conforming to ANSI/IEEE 802.1D. The input uplinkPort identifies the OLT physical port interfacing with the IP layer backbone netwo...

ITU-T Q.834.4 (2003) Cor. 1 (01/2004)

June, 2004

...ed); The input mACBridgeProfile provides the characteristics for the bridge conforming to ANSI/IEEE 802.1D. The input uplinkPort identifies the OLT physical port interfacing with the IP layer backbone netwo...

ITU-T Q.834.1 (06/2004): ATM-PON requirements and managed entities for the network and network element views

March, 2005

...r Installation Interfaces – Asymmetric Digital Subscriber Line (ADSL) Metallic Interface. [23] IEEE 802.1D, Standard for Local and Metropolitan Area Networks: Media Access Control (MAC) Bridges. 3 Definitio...

ITU-T E.351 (03/2000): Routing of multimedia connections across TDM-, ATM- and IP-based networks

November, 2000

...Differentiated Services and IEEE 802.1D, ATM Forum, Atlanta, GA, February 1999. [B99] BERNET (Y.), et al.: A Framework for Differentiated Services, IETF draft-ietf-diffserv-framework-02.txt, February 1999. ...

ITU-T E.360.1 (05/2002): Framework for QoS routing and related traffic engineering methods for IP-, ATM-, and TDM-based multiservice networks

February, 2003

Search URL

ISO

Study Group	Normative	Informative	Textual
JTC1/SC6 (802 fast-track)	7	2	3
JTC1/SC25 (UPnP fast-track)	7	5	0
TC 22/SC 31	1	0	0
TC204	0	0	1
JTC1 (ECMA fast-track)	1	0	3
	16	**7**	**7**

ISO search
https://www.iso.org/obp/ui/#search

JTC1/SC6 (IEEE 802 fast-track)

ISO/IEC/IEEE 8802-11:2018(en)
Information technology — Telecommunications and information exchange between systems — Local and metropolitan area networks — Specific requirements — Part 11: Wireless LAN medium access control (MAC) and physical layer (PHY) specifications

9.4.2.31 TCLAS element

...802.1Q parameters 3 Filter Offset parameters 4 IP and higher layer parameters 5 IEEE 802.1D/Q parameters 6 IEEE 802.11 MAC header parameters 7–255 Reserved When the Classifier... ...802.1D-2004...

10.2.4.2 HCF contention based channel access (EDCA)

...AC_BE. Table 10-1 UP-to-AC mappings Priority UP (Same as IEEE 802.1D user priority) IEEE 802.1D designation AC Transmit queue (dot11AlternateEDCAActivated...

ISO/IEC/IEEE 8802-3:2017(en)
Information technology — Telecommunications and information exchange between systems — Local and metropolitan area networks — Specific requirements — Part 3: Standard for Ethernet

1.3 Normative references

...Local and metropolitan area networks—Station and Media Access Control Connectivity Discovery. IEEE Std 802.1D™ , IEEE Standard for Local and metropolitan area networks—Media Access Control (MAC...

1.4.333 Point-to-point emulation

...star topology with the OLT in the nexus, and is required for compliance with IEEE 802.1D bridging.

ISO/IEC/IEEE 8802-1AC:2018(en)
Information technology — Telecommunications and information exchange between systems — Local and metropolitan area networks — Part 1AC: Media access control (MAC) service definition

Introduction

Search URL