

IEEE 802.3 Working Group March 2025 Plenary Session

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Web site: www.ieee802.org/3

Current IEEE 802.3 activities

IEEE 802.3 Task Forces

- IEEE P802.3da 10 Mb/s Single Pair Multidrop Segments Enhancement
- IEEE P802.3dg 100 Mb/s Long-Reach Single Pair Ethernet
- IEEE P802.3dj 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet
- IEEE P802.3dk Greater than 50 Gb/s Bidirectional Optical Access PHYs
- IEEE P802.3dm Asymmetrical Electrical Automotive Ethernet
- IEEE P802.3.2 (IEEE 802.3.2a) YANG Data Model (Revision)

IEEE 802.3 Study Group

- IEEE 802.3 Ethernet Powering Cabling Restrictions
- IEEE 802.3 Pin-Optimized PHY Interface Study Group.

IEEE 802.3 Ad Hocs

- IEEE 802.3 New Ethernet Applications
- IEEE 802.3 Power Distribution Coordinating Committee (PDCC)
- IEEE 802.3 Channel Operating Margin (COM) Open Source Project

IEEE P802.3da 10 Mb/s Single Pair Multidrop Segments Enhancement Task Force

Description

Specify additions and modifications of the Physical Layer (including reconciliation sublayers), management parameters, Ethernet support for time synchronization protocols, and optional power delivery supporting multiple powered devices on the 10 Mb/s mixing segment.

Web site: <http://ieee802.org/3/da/index.html>

Status

First Working Group recirculation ballot of IEEE P802.3da draft D2.1 closed 23 February 2025

The ballot exceeded the required 75% for consensus to approve the draft

Meeting plan

Consider comments receive during first Working Group recirculation ballot

A total of 117 comments were received before the ballot closed.

An additional 6 comments were received after the ballot closed

These comments will be considered if, based on a vote, if necessary, there is no objection

IEEE P802.3dg 100 Mb/s Long-Reach Single Pair Ethernet Task Force

Description

Specify additions to and appropriate modifications of IEEE Std 802.3 to add 100 Mb/s Physical Layer specifications and management parameters for operation, and associated optional provision of power, using a single balanced pair of conductors

Web site: <https://ieee802.org/3/dg/index.html>

Status

Selecting set of baseline proposals to satisfy project objectives

Meeting plan

Continue to work on selection of a set of baseline proposals

IEEE P802.3dj 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet Task Force

Description

Define Ethernet MAC parameters for 1.6 Tb/s. Define physical layer specifications, and management parameters for the transfer of Ethernet format frames at 800 Gb/s and 1.6 Tb/s over copper and single-mode fiber physical medium dependent (PMD) sublayers based on 200 Gb/s or greater per lane signaling technologies. Using these new definitions for 800 Gb/s and 1.6 Tb/s, define physical layer specifications and management parameters for the transfer of Ethernet format frames at 200 Gb/s and 400 Gb/s, when applicable.

Web site: <https://ieee802.org/3/dj/index.html>

Status

Progressing towards a technically complete draft

Task Force review of IEEE P802.3dj draft D1.4 closed on 22 February 2025

Meeting plan

Consider comments received during IEEE P802.3dj draft D1.4 Task Force review

IEEE P802.3dk Greater than 50 Gb/s Bidirectional Optical Access PHYs Task Force

Description

Define physical layer specifications and management parameters for symmetric bidirectional operation at greater than 50 Gb/s over a single strand of single mode fiber of at least 10 km.

Web site: <https://ieee802.org/3/dk/index.html>

Status

Progressing towards a technically complete draft

Task Force review of IEEE P802.3dk draft D1.2 closed on 10 February 2025

No comments received

IEEE P802.3dk draft D2.0 submitted to the IEEE 802.3 Working Group for preview in preparation for a request to proceed to initial Working Group ballot during plenary

Meeting plan

Progress project towards initial Working Group ballot

IEEE P802.3dm Asymmetrical Electrical Automotive Ethernet Task Force

Description

Specify additions to and appropriate modifications of IEEE Std 802.3 to add Physical Layer specifications and management parameters for electrical media and operating conditions that are optimized for automotive end-node camera links for operation up to 10 Gb/s in one direction and with a lower data rate in the other direction.

Status

Selecting set of baseline proposals to satisfy project objectives

Meeting plan

Continue to work on selection of a set of baseline proposals

IEEE P802.3.2 (IEEE 802.3.2a) YANG Data Model (Revision) Task Force

Description

This revision is to address accumulated maintenance changes as well as appropriate updates to the IEEE Std 802.3.2 YANG modules to support IEEE Std 802.3 amendments published since IEEE Std 802.3.2 was first published.

Web site: <https://ieee802.org/3/2/a/index.html>

Status

Second Standards Association recirculation ballot of draft D3.2 opened 28 February 2025

Meeting plan

IEEE P802.3.2 (IEEE 802.3.2a) Task Force is not planning to meet during the plenary session

This 15-day recirculation ballot does not close until after plenary session on 15 March 2025

Progress conditional approval to proceed to RevCom submittal

IEEE 802.3 Ethernet Powering Cabling Restrictions Study Group

Description

Develop a Project Authorization Request (PAR) and Criteria for Standards Development (CSD) responses for clarification on the cabling requirements for Ethernet powering

Web site: <https://www.ieee802.org/3/EPCR/index.html>

Status

The Study Group has completed development of the IEEE P802.3dp IEEE Standard for Ethernet Amendment: Cabling Restrictions for Single Pair Power over Ethernet (SPoE) draft PAR, as well as supporting draft CSD and draft objectives

Draft PAR: <https://mentor.ieee.org/802-ec/dcn/25/ec-25-0020-00-LMSC-draft-ieee-p802-3dp-par.pdf>

Draft CSD: <https://mentor.ieee.org/802-ec/dcn/25/ec-25-0021-00-LMSC-draft-ieee-p802-3dp-csd.pdf>

Draft objectives: <https://www.ieee802.org/3/EPCR/public/2501/EPCR_Objectives_V2.pdf>

Meeting plan

Progress the necessary IEEE P802.3dp draft PAR, CSD and objectives approvals

IEEE 802.3 Pin-Optimized PHY Interface Study Group

Description

Develop a Project Authorization Request (PAR) and Criteria for Standards Development (CSD) responses for Ethernet Media Independent Interfaces (MII) optimized for an exposed interconnect

Web site: <https://www.ieee802.org/3/POPI/index.html>

Status

Developing PAR, CSD responses and objectives

Meeting plan

Progress towards completing PAR, CSD responses and objectives

IEEE 802.3 New Ethernet Applications (NEA) Ad Hoc

Description

The goal of this activity is to assess requirements for new Ethernet-based applications, identify gaps not currently addressed by IEEE 802.3 standards, and facilitate building industry consensus towards proposals to initiate new standards development efforts

Web site: http://ieee802.org/3/ad_hoc/ngrates/index.html

Status

Two meetings held since November 2024 plenary session

Initial and second IEEE 802.3 New Ethernet Applications Ad Hoc Ethernet for AI Assessment

Web site: https://www.ieee802.org/3/ad_hoc/E4AI/index.html

Meeting plan

No meetings are planned for the March 2025 plenary session

IEEE 802.3 Power Distribution Coordinating Committee (PDCC) Ad Hoc

Description

The Chair of the IEEE 802.3 Working Group has established an ad hoc to review output and build consensus on input for liaisons regarding power delivery over cabling cited in IEEE 802.3 standards and projects, e.g.,

- Build consensus on public inputs and public comments for the next edition of NFPA70; and

- Build consensus on input to IEC 60364-7-716, and proposed direction of the IEEE 802.3 Category C liaison expert to IEC TC64/MT2; and

- Build consensus on input to IEC TC108/PT63315, and proposed direction of the IEEE 802.3 Category C liaison expert; and

- Build consensus on input to ITU-T SG5; and

- Build consensus on input to IEC SC25/WG3

The output of this Ad Hoc is subject to approval of the 802.3 Working Group

Web site: https://ieee802.org/3/ad_hoc/PDCC/index.html

Meeting plan

Continue reviewing output and building consensus on input for liaisons regarding power delivery over cabling cited in IEEE 802.3 standards and projects

IEEE 802.3 Channel Operating Margin (COM) Open Source Project Ad Hoc

Description

Reference software code implementations and configuration spreadsheets of the Channel Operating Margin (COM) equations and methods in IEEE Std. 802.3 and Amendments (e.g. Annex 93A and 178A). It will also provide branch support to enable participants to development new features and new capabilities for use by industry.

Web site: https://www.ieee802.org/3/ad_hoc/COM/

Status

IEEE SA Open Source Committee (OSCom) approved the project on 19 December 2024

Meeting plan

No COM Open Source project meetings are planned for the March 2025 plenary session
Two COM-related topics will be considered in the IEEE P802.3dj Electrical track

IEEE 802.3 Officers, Subgroup Chairs and Vice-Chairs

IEEE 802.3 Chair: David Law <dlaw@hpe.com>

IEEE 802.3 Vice Chair: Adam Healey <adam.healey@broadcom.com>

IEEE 802.3 Secretary: Jon Lewis <jon.lewis@dell.com>

IEEE 802.3 Executive Secretary: Chad Jones <cmjones@cisco.com>

IEEE 802.3 Treasurer: Valerie Maguire <vmaguire@ieee.org>

IEEE 802.3 Task Force chairs

IEEE P802.3da 10 Mb/s Single Pair Multidrop Segments Enhancement: Chad Jones <cmjones@cisco.com>

IEEE P802.3dg 100 Mb/s Long-Reach Single Pair Ethernet: George Zimmerman <george@cmephyconsulting.com>

IEEE P802.3dj 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet: John D'Ambrosia <jdambrosia@ieee.org>

IEEE P802.3dk Greater than 50 Gb/s Bidirectional Optical Access PHYs: Yuanqiu Luo <yuanqiu.luo@futurewei.com>

IEEE P802.3dm Asymmetrical Electrical Automotive Ethernet: Jon Lewis <jon.lewis@dell.com>

IEEE P802.3.2 (IEEE 802.3.2a) YANG Data Model (Revision) Marek Hajduczenia <mxhajduczenia@gmail.com>

IEEE 802.3 Study Group chair

IEEE 802.3 Ethernet Powering Cabling Restrictions: Chad Jones <cmjones@cisco.com>

IEEE 802.3 IEEE 802.3 Pin-Optimized PHY Interface: Jason Potterf <jpotterf@cisco.com>

IEEE 802.3 Task Force vice-chair

IEEE P802.3dj 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet: Mark Nowell <mnowell@cisco.com>

IEEE P802.3dm Asymmetrical Electrical Automotive Ethernet: Natalie Wienckowski <natalie@ivnsolutionsllc.com>

Upcoming meetings

Please see <http://www.ieee802.org/3/calendar.html> for latest calendar of meetings

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