P802.3cm

Submitter Email: david_law@ieee.org
Type of Project: Amendment to IEEE Standard 802.3-2015
PAR Request Date: 23-Jan-2018
PAR Approval Date:
PAR Expiration Date:
Status: Unapproved PAR, PAR for an Amendment to an existing IEEE Standard

1.1 Project Number: P802.3cm
1.2 Type of Document: Standard
1.3 Life Cycle: Full Use

2.1 Title: Standard for Ethernet
Amendment Physical Layer and Management Parameters for 400 Gb/s over Multimode Fiber

3.1 Working Group: Ethernet Working Group (C/LM/WG802.3)
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3.2 Sponsoring Society and Committee: IEEE Computer Society/LAN/MAN Standards Committee (C/LM)
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4.1 Type of Ballot: Individual
4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 11/2019
4.3 Projected Completion Date for Submittal to RevCom
Note: Usual minimum time between initial sponsor ballot and submission to Revcom is 6 months.: 05/2020

5.1 Approximate number of people expected to be actively involved in the development of this project: 40
5.2.a. Scope of the complete standard: This standard defines Ethernet local area, access and metropolitan area networks. Ethernet is specified at selected speeds of operation; and uses a common media access control (MAC) specification and management information base (MIB). The Carrier Sense Multiple Access with Collision Detection (CSMA/CD) MAC protocol specifies shared medium (half duplex) operation, as well as full duplex operation. Speed specific Media Independent Interfaces (MIIs) provide an architectural and optional implementation interface to selected Physical Layer entities (PHY). The Physical Layer encodes frames for transmission and decodes received frames with the modulation specified for the speed of operation, transmission medium and supported link length. Other specified capabilities include: control and management protocols, and the provision of power over selected twisted pair PHY types.

5.2.b. Scope of the project: Define Physical Layer specifications (PHY) and management parameters for the transfer of Ethernet format frames at 400 Gb/s over fewer than 16 pairs of multimode fiber physical media.

5.3 Is the completion of this standard dependent upon the completion of another standard: No
5.4 Purpose: This document will not include a purpose clause.
5.5 Need for the Project: Rapid growth of server, network, and internet traffic is driving the need for higher data rates, higher density, lower cost fiber optic solutions, especially in the data center space. To address these needs, advances in technology now allow the specification of new 400 Gb/s physical layer types operating over fewer multimode pairs than in existing IEEE 802.3 Ethernet projects and standards. This will

support both the installed base and new installations of multimode fiber cable.

5.6 Stakeholders for the Standard: Users and producers of systems and components for servers, networking systems, enterprise and cloud-scale data centers, service providers, and high performance computing.

Intellectual Property
6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?: No
6.1.b. Is the Sponsor aware of possible registration activity related to this project?: No

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7.1 Are there other standards or projects with a similar scope?: No
7.2 Joint Development
   Is it the intent to develop this document jointly with another organization?: No

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8.1 Additional Explanatory Notes: