

# P802.3bq

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**Submitter Email:** [david\\_law@ieee.org](mailto:david_law@ieee.org)

**Type of Project:** Amendment to IEEE Standard 802.3-2012

**PAR Request Date:** 15-Feb-2013

**PAR Approval Date:**

**PAR Expiration Date:**

**Status:** Unapproved PAR, PAR for an Amendment to an existing IEEE Standard

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**1.1 Project Number:** P802.3bq

**1.2 Type of Document:** Standard

**1.3 Life Cycle:** Full Use

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**2.1 Title:** IEEE Standard for Ethernet

Amendment: Physical Layer and Management Parameters for 40 Gb/s Operation, Type 40GBASE-T

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**3.1 Working Group:** Ethernet Working Group (C/LM/WG802.3)

**Contact Information for Working Group Chair**

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**3.2 Sponsoring Society and Committee:** IEEE Computer Society/LAN/MAN Standards Committee (C/LM)

**Contact Information for Sponsor Chair**

**Name:** Paul Nikolich

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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:** 08/2015

**4.3 Projected Completion Date for Submittal to RevCom:** 02/2016

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**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:** Specify a Physical Layer (PHY) for operation at 40 Gb/s on balanced twisted-pair copper cabling, using existing Media Access Control, and with extensions to the appropriate physical layer management parameters.

**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:** With continued growth of server capabilities, network and Internet traffic, datacenters continue to require higher data rates for equipment interconnections. The IEEE 802.3 BASE-T family of technologies allows for seamless upgrade between older rates and newer rates. Currently, IEEE Std 802.3 does not support 40 Gb/s BASE-T operation. There is a market need for a low cost 40 Gb/s BASE-T solution with auto-negotiation capability for datacenter applications.

**5.6 Stakeholders for the Standard:** Stakeholders identified to date includes but are not limited to: users and producers of systems and components for servers, network storage, networking systems and data centers.

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**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 (Item Number and Explanation):**