

# P802.3bp

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

**Type of Project:** Modify Existing Approved PAR

**PAR Request Date:** 22-Jan-2014

**PAR Approval Date:**

**PAR Expiration Date:**

**Status:** Unapproved PAR, Modification to a Previously Approved PAR for an Amendment

**Root PAR:** P802.3bp **Approved on:** 05-Dec-2012

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

**1.2 Type of Document:** Standard

**1.3 Life Cycle:** Full Use

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**2.1 Title:** Standard for Ethernet Amendment Physical Layer Specifications and Management Parameters for 1 Gb/s Operation over a Single Twisted Pair Copper Cable

**Changes in title:** ~~IEEE~~ Standard for Ethernet Amendment Physical Layer Specifications and Management Parameters for 1 Gb/s Operation over ~~fewer than Three~~ **Single** Twisted Pair Copper Cable

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

**Contact Information for Working Group Chair**

**Name:** David Law

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**Contact Information for Working Group Vice-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**

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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:** 11/2014

**4.3 Projected Completion Date for Submittal to RevCom:** 05/2015

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**5.1 Approximate number of people expected to be actively involved in the development of this project:**

**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:** The scope of this project is to specify additions to and appropriate modifications of IEEE Std 802.3 to add a point-to-point 1 Gb/s Physical Layer (PHY) specifications and management parameters for operation over a single twisted pair copper

**Changes in scope of the project:** The scope of this project is to specify additions to and appropriate modifications of IEEE Std 802.3 to add a point-to-point 1 Gb/s Physical Layer (PHY) specifications and management parameters for operation ~~on over fewer than single three~~

cable.

~~pairs of twisted~~ pair copper cables cable.

**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:** Adoption of Ethernet into new market areas in automotive, industrial controls and automation, transportation (aircraft, railway and heavy trucks) has generated a need for a 1 Gb/s solution that will operate over a single twisted pair copper cable on a lower-performance channel as well as other applications, such as carbon footprint sensitive applications, that will benefit by a reduction in the number of wire pairs and magnetics. IEEE Std 802.3 does not currently support 1 Gb/s operation over fewer than four pairs of twisted copper cable.

**5.6 Stakeholders for the Standard:** Stakeholders identified to date includes but are not limited to: users and producers of systems and components for the automotive, industrial controls, transportation (aircraft and rail) industries.

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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):** The IEEE P802.3bp project has decided to support only single pair operation. Based on this, in item 2.2 'Amendment title', item 5.2B 'Scope of project' and item 5.5 'Need for the project', fewer than three twisted pairs has been changed to a single twisted pair.

In item 4.2 and item 4.3 the dates were corrected.