

P802.3bj

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Type of Project: Modify Existing Approved PAR

PAR Request Date: 08-Oct-2012

PAR Approval Date:

PAR Expiration Date:

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

Root PAR: P802.3bj **Approved on:** 10-Sep-2011

1.1 Project Number: P802.3bj

1.2 Type of Document: Standard

1.3 Life Cycle: Full Use

2.1 Title: IEEE Standard for Ethernet

Amendment: Physical Layer Specifications and Management Parameters for 100 Gb/s Operation Over Backplanes and Copper Cables

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

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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: 07/2013

4.3 Projected Completion Date for Submittal to RevCom: 02/2014

5.1 Approximate number of people expected to be actively involved in the development of this project: 65

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 100 Gb/s 4 lane Physical Layer (PHY) specifications and management parameters for operation on backplanes and twinaxial copper cables, and specify optional Energy Efficient Ethernet (EEE) for 40 Gb/s and 100 Gb/s operation over backplanes and copper cables.

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 100 Gb/s 4 lane Physical Layer (PHY) specifications and management parameters for operation on backplanes and twinaxial copper cables, and specify optional Energy Efficient Ethernet (EEE) for 40 Gb/s and 100 Gb/s operation over backplanes and copper cables.

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.

Changes in purpose:

5.5 Need for the Project: Rapid growth of server, network, and internet traffic is driving the need for higher data rates over backplanes and high density, low cost twinaxial copper cables.

- IEEE Std 802.3 does not currently support 100Gb/s operation on backplane media.

- There is a market need for a lower cost, lower power, and higher density solution for twinaxial copper cables than 100GBASE-CR10.

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, data centers, high performance computing, and telecommunications carriers.

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

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

8.1 Additional Explanatory Notes (Item Number and Explanation): ~~Item 0: As always for an IEEE 802.3 amendment this amendment will be to the then-current-revision at the beginning of sponsor ballot.~~

~~Item 5.2b: The amendment will comply with IEEE Std 802, IEEE Std 802.1D, and IEEE Std 802.1Q.~~

Item 5.2b – scope has been expanded to allow the addition of optional Energy Efficient Ethernet (EEE) for 40 Gb/s and 100 Gb/s operation over backplanes and copper cables.