

P802.15.13

This PAR is valid until 31-Dec-2021. The original PAR was approved on 23-Mar-2017. It was modified on 03-Jun-2020.

PAR Extension Request Date: 23 Jul 2021

PAR Extension Approval Date:

Extension Request Submitter Email: pat.kinney@kinneyconsultingllc.com

Number of Previous Extensions Requested: 0

1. Number of years that the extension is being requested: 1

2. Why an Extension is Required (include actions to complete): An extension is needed to complete IEEE-SA balloting of the draft amendment. P802.15.13 D4.0 completed initial IEEE-SA ballot on January 13, 2021, with 95% approval and 314 technical and editorial comments. Comment resolution is underway. The plan is to have the draft standard approved by the end of 2021. This extension request is a precautionary measure to account for any unforeseen circumstances and delays.

3.1. What date did you begin writing the first draft: 11 Feb 2019

3.2. How many people are actively working on the project:10

3.3. How many times a year does the working group meet?

In person: 6

Via teleconference: 6

3.4. How many times a year is a draft circulated to the working group: 6

3.5. What percentage of the Draft is stable: 85%

3.6. How many significant work revisions has the Draft been through: 4

4. When will/did initial Standards Association Balloting begin: Dec 2020

When do you expect to submit the proposed standard to RevCom: Oct 2021

Has this document already been adopted by another source? (if so please identify) No

For an extension request, the information on the original PAR below is not open to modification.

Submitter Email: bheile@ieee.org

Type of Project: New IEEE Standard

Project Request Type: Modify / New

PAR Request Date: 22 Apr 2020

PAR Approval Date: 03 Jun 2020

PAR Expiration Date: 31 Dec 2021

PAR Status: Active

Root PAR: P802.15.13

Root PAR Approved on: 23 Mar 2017

1.1 Project Number: P802.15.13

1.2 Type of Document: Standard

1.3 Life Cycle: Full Use

2.1 Project Title: Standard for Multi-Gigabit per Second Optical Wireless Communications (OWC), with Ranges up to 200 meters, for both stationary and mobile devices

Change to Title: Standard for Multi-Gigabit per Second Optical Wireless Communications (OWC) with Ranges up to 200 meters [for both stationary and mobile devices](#)

3.1 Working Group: Wireless Specialty Networks (WSN) Working Group(C/LM/802.15 WG)

3.1.1 Contact Information for Working Group Chair:

Name: PATRICK KINNEY

Email Address: pat.kinney@kinneyconsultingllc.com

3.1.2 Contact Information for Working Group Vice Chair:

Name: Richard Alfvín

Email Address: alfvín@ieee.org

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

3.2.1 Contact Information for Standards Committee Chair:

Name: Paul Nikolich

Email Address: p.nikolich@ieee.org

3.2.2 Contact Information for Standards Committee Vice Chair:

Name: James Gilb

Email Address: gilb@ieee.org

3.2.3 Contact Information for Standards Representative:

Name: James Gilb

Email Address: gilb@ieee.org

4.1 Type of Ballot: Individual

4.2 Expected Date of submission of draft to the IEEE SA for Initial Standards Committee Ballot:

Jun 2020

Change to Expected Date of submission of draft to the IEEE SA for Initial Standards Committee

Ballot: ~~Nov~~ Jun ~~2018~~ 2020

4.3 Projected Completion Date for Submittal to RevCom: Jan 2021

Change to Projected Completion Date for Submittal to RevCom: ~~May~~ Jan ~~2019~~ 2021

5.1 Approximate number of people expected to be actively involved in the development of this project: 15

5.2 Scope of proposed standard: This standard defines a Physical (PHY) and Media Access Control (MAC) layer using light wavelengths from 10 000 nm to 190 nm

in optically transparent media for optical wireless communications. The standard is capable of delivering data rates up to 10 Gb/s at distances

in the range of 200 m unrestricted line of sight. It is designed for point to point and point to multi point communications in both

non-coordinated and coordinated topologies. For coordinated topologies with more than one peer coordinator there will be a master

coordinator. The standard includes adaptation to varying channel conditions and maintaining connectivity while moving within the range of a

single coordinator or moving between coordinators.

5.3 Is the completion of this standard contingent upon the completion of another standard? No

5.4 Purpose: The purpose of this standard is to define OWC specifications in optically transparent media enabling high data rate transfer

among end points at rates up to 10 Gb/s and ranges up to 200 m unrestricted line of site and which are capable of meeting the needs of

industrial and similar classes of applications requiring, secure, high performance, high data rate communications which are non-interfering with

existing Radio Frequency (RF) systems

5.5 Need for the Project: Given the growing expectation of ubiquitous wireless connectivity in industrial environments, the need for unlicensed, high bandwidth, easy-to-use wireless communications technology, immune to RF interference and which does not overload existing RF spectrum or necessarily require additional hardware, has never been greater. This standard specifically addresses these needs. In particular, optical wireless based solutions to this problem address a significant opportunity, extending to billions of existing industrial devices, to provide secure, non RF based communications between industrial devices and/or between industrial devices and fixed infrastructure on a one to one, or one to many or many to one basis at acceptable data rates. Potential applications include control of mobile robots in manufacturing cells or on assembly lines, automated guided vehicle systems, small cell backhaul, security monitoring in petrochemical plants, secure communications in nuclear facilities and hospitals, etc.

There is also a similar emerging need in commercial/business settings, especially in environments requiring high data rates and high levels of security.

5.6 Stakeholders for the Standard: Industrial devices manufactures, system integrators, aircraft and transportation manufactures, medical equipment manufacturers, lighting manufacturers, silicon providers, networking equipment manufacturers, and academic researchers

6.1 Intellectual Property

6.1.1 Is the Standards Committee aware of any copyright permissions needed for this project?

Yes

Explanation: This standard is expected to specify the use of OUI, CID, and EUI-48

6.1.2 Is the Standards Committee 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 Is it the intent to develop this document jointly with another organization? No

8.1 Additional Explanatory Notes: 2.1: For improved clarity and ease of seeing what is in the Standard, the Task Group felt the two main classes of application should be explicitly mentioned in the title.

5.2: The standard may include Multiple Input Multiple Output (MIMO), and mechanisms enabling heterogeneous

operation, i.e. operation with both OWC and existing RF wireless data communications standards in the same network.

7.1 Technically there are no standards or projects with a similar scope, but ITU-T defines a new recommendation for visible light communications (i.e. no Infra-Red (IR) and Ultra Violet (UV)) and is currently in a process to align its objectives according to work done previously in IEEE 802.15.7. Additionally the P802.11bb project is developing a visible light amendment using on the 802.11 MAC.

Change to Additional Explanatory Notes: ~~Line 2.1: For improved clarity and ease of seeing what is in the Standard, the Task Group felt the two main classes of application should be explicitly mentioned in the title.~~

5.2: The standard may include Multiple Input Multiple Output (MIMO), and mechanisms enabling heterogeneous operation, ~~ie i.e.~~ operation with both OWC and existing RF wireless data communications standards in the same network. ~~Line 7.1 Technically there are no standards or projects with a similar scope, but ITU-T defines a new recommendation for visible light communications (i.e. no Infra - Red (IR) and Ultra Violet (UV)) and is currently in a process to align its objectives according to work done previously in IEEE 802.15.7. There Additionally is the also P802.11bb an project Interest is Group developing activity in 802.11 looking at where a OWC visible might light fit amendment as using part on of the 802.11 MAC.~~