SLOVENSKI STANDARD
SIST EN IEC 63203-801-2:2023

01-februar-2023

Nosljive elektronske naprave in tehnologije - 801-2. del: Pametno telesno omrežje (SmartBAN) - Manj zahteven nadzor dostopa do medija (MAC) za SmartBAN (IEC 63203-801-2:2022)

Wearable electronic devices and technologies - Part 801-2: Smart body area network (SmartBAN) - Low complexity medium access control (MAC) for SmartBAN (IEC 63203-801-2:2022)

Tragbare elektronische Geräte und Technologien -Teil 801-2: Smartes am Körper getragenes Netzwerk (SmartBAN) - Medium Access Control (MAC) mit geringer Komplexität für SmartBAN (IEC 63203-801-2:2022)

Technologies et dispositifs électroniques prêts-à-porter - Partie 801-2: Smart body area network (SmartBAN) - Contrôle d'accès au support (MAC) à faible complexité pour SmartBAN (IEC 63203-801-2:2022)

Ta slovenski standard je istoveten z: **EN IEC 63203-801-2:2022**

ICS:

31.080.99	Drugi polprevodniški elementi	Other semiconductor devices
35.110	Omreževanje	Networking
59.080.80	Inteligentne tekstilije	Smart textiles

SIST EN IEC 63203-801-2:2023 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 63203-801-2

December 2022

ICS 35.100.01; 35.240.80

English Version

Wearable electronic devices and technologies - Part 801-2: Smart body area network (SmartBAN) - Low complexity medium access control (MAC) for SmartBAN (IEC 63203-801-2:2022)

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of document 124/198/FDIS, future edition 1 of IEC 63203-801-2, prepared by IEC/TC 124 "Wearable electronic devices and technologies" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 63203-801-2:2022.

The following dates are fixed:

• latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2023-09-09
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2025-12-09

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Endorsement notice

The text of the International Standard IEC 63203-801-2:2022 was approved by CENELEC as a European Standard without any modification.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 63203-801-1	2022	Wearable electronic devices and technologies - Part 801-1: Smart body area network (SmartBAN) - Enhanced ultra-low power physical layer	EN IEC 63203-801-1	2022

IEC 63203-801-2

Edition 1.0 2022-11

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

Wearable electronic devices and technologies – Part 801-2: Smart body area network (SmartBAN) – Low complexity medium access control (MAC) for SmartBAN

Technologies et dispositifs électroniques prêts-à-porter – Partie 801-2: Smart body area network (SmartBAN) – Contrôle d'accès au support (MAC) à faible complexité pour SmartBAN

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

ICS 35.100.01; 35.240.80

ISBN 978-2-8322-6001-2

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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WEARABLE ELECTRONIC DEVICES AND TECHNOLOGIES –

Part 801-2: Smart body area network (SmartBAN) – Low complexity medium access control (MAC) for SmartBAN

FOREWORD

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IEC 63203-801-2 has been prepared by IEC technical committee 124: Wearable electronic devices and technologies. It is an International Standard.

The text of this International Standard is based on the following documents:

Draft	Report on voting
124/198/FDIS	124/206/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available

at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

A list of all parts in the IEC 63203 series, published under the general title *Wearable electronic devices and technologies*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

IMPORTANT – The "colour inside" logo on the cover page of this document indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

TC 124 is developing International Standards (IS) for body area network (BAN) to define the wireless connectivity between the hub coordinator and the sensing nodes. The IEC 63203-801 series consists of the following sub-parts, under the general part title "Smart body area network (SmartBAN)":

IEC 63203-801-1: Enhanced ultra-low power physical layer

IEC 63203-801-2: Low complexity medium access control (MAC) for SmartBAN

The present document describes the medium access control (MAC) specifications including channel structure, MAC frame formats and MAC functions.

This document originates from the corresponding technical specification (ETSI TS 103 325) standardized in the European Telecommunication Standard Institute (ETSI) and captures the results the work of IEC TC 124 Working Group 4 on devices and systems. The current document reflects contributions and discussions by IEC TC 124 experts, mirror committees, liaison members and Joint Advisory Group (JAG) between IEC SyC. AAL, IEC TC 100 and IEC TC 124. This document contains material gathered from reports and group output from the IEC TC 124 meetings in May 2018 (Manchester), October 2018 (Busan), May 2019 (San Francisco), September 2019 (Shanghai), November 2020 (online) as well as information obtained during various web meetings.

Experts from the following national committees, liaison organizations have contributed: BE, CN, DE, FI, FR, GB, IN, JP, KR, MY, NL, US and ETSI TC SmartBAN.

This document is also positioned as a result of the activities of the JAG. At the IEC General Meeting in Busan in 2018, three committees related to wearable systems and technologies, SyC. AAL, IEC TC 100 and IEC TC 124 had a joint workshop and agreed to collaborate to develop relevant standards and to share roles. This collaboration agreement was advanced to a Joint Advisory Group (JAG) and the JAG was established managed by SyC. AAL in 2019.

The target audience for this document includes the following stakeholders who have an interest in the systems and services using wearable devices:

- consumer electronics (CE) and information communications technology (ICT) device manufacturers;
- system integrators who want to utilize wearable device and technologies;
- service operators who are interested in the AAL systems and services;
- stakeholders who want to understand the technologies and requirements for wireless connectivity between wearable sensor nodes and hub coordinators.

WEARABLE ELECTRONIC DEVICES AND TECHNOLOGIES –

Part 801-2: Smart body area network (SmartBAN) – Low complexity medium access control (MAC) for SmartBAN

1 Scope

This part of IEC 63203-801 specifies low complexity medium access control (MAC) for SmartBAN.

As the use of wearables and connected body sensor devices grows rapidly in the Internet of Things (IoT), wireless body area networks (BANs) facilitate the sharing of data in smart environments such as smart homes, smart life, etc. In specific areas of digital healthcare, wireless connectivity between the edge computing device or hub coordinator and the sensing nodes requires a standardized communication interface and protocols.

The present document describes the following medium access control (MAC) specifications:

– channel structure;
– MAC frame formats;
– MAC functions.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 63203-801-1:2022, *Wearable electronic devices and technologies – Part 801-1: Smart body area network (SmartBAN) – Enhanced ultra-low power physical layer*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at https://www.electropedia.org/
- ISO Online browsing platform: available at https://www.iso.org/obp

3.1
beacon
frame transmitted by a hub to facilitate network management, such as the coordination of medium access and power management of the nodes in the SmartBAN, and to facilitate clock synchronizationwith the hub

3.2
beacon period
duration during which a beacon is transmitted