

Zdravotnícke informácie. Komunikácia zdravotníckeho prístroja na mieste zdravotnej starostlivosti. Časť 30200: Transportný profil. Pripojený kábel (ISO/IEEE 11073-30200: 2004). Zmena A1

STN EN ISO 11073-30200/A1

84 8037

Health informatics - Point-of-care medical device communication - Part 30200: Transport profile - Cable connected (ISO/IEEE 11073-30200:2004)

Táto norma obsahuje anglickú verziu európskej normy. This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 12/15

Obsahuje: EN ISO 11073-30200:2005/A1:2015, ISO/IEEE 11073-30200:2004/Amd 1:2015

STN EN ISO 11073-30200/A1: 2016

## EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN ISO 11073-30200:2005/A1

September 2015

ICS 35.240.80

#### **English Version**

Health informatics - Point-of-care medical device communication - Part 30200: Transport profile - Cable connected - Amendment 1 (ISO/IEEE 11073-30200:2004/Amd 1:2015)

Informatique de santé - Communication entre dispositifs médicaux sur le site des soins - Partie 30200: Profil de transport - Connexion par câble - Amendement 1 (ISO/IEEE 11073-30200:2004/Amd 1:2015)

Medizinische Informatik - Kommunikation patientennaher medizinischer Geräte - Teil 30200: Transportprofil - Drahtgebundene Übertragung -Änderung 1 (ISO/IEEE 11073-30200:2004/Amd 1:2015)

This amendment A1 modifies the European Standard EN ISO 11073-30200:2005; it was approved by CEN on 13 September 2015.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This amendment exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

## STN EN ISO 11073-30200/A1: 2016 EN ISO 11073-30200/A1: 2016

Contents	Page
European foreword	3

#### **European foreword**

The text of ISO 11073-30200:2004/Amd1:2015 has been prepared by Technical Committee ISO/TC 215 "Health informatics" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 11073-30200:2005/A1:2015 by Technical Committee CEN/TC 251 "Health informatics" the secretariat of which is held by NEN.

This Amendment to the European Standard EN ISO 11073-30200:2005 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 2016, and conflicting national standards shall be withdrawn at the latest by March 2016.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

#### **Endorsement notice**

The text of ISO 11073-30200:2004/Amd 1:2015 has been approved by CEN as EN ISO 11073-30200:2005/A1:2015 without any modification.

# INTERNATIONAL STANDARD 11073-30200/A1: 2016 STANDARD 11073-30200/A1: 2016 11073-30200/A1: 2016 11073-30200/A1: 2016

## ISO/IEEE 11073-30200

First edition 2004-12-15 **AMENDMENT 1** 2015-03-01

## Health informatics — Point-of-care medical device communication —

Part 30200:

Transport profile — Cable connected

**AMENDMENT 1** 

Informatique de santé — Communication entre dispositifs médicaux sur le site des soins —

Partie 30200: Profil de transport — Connexion par câble

AMENDEMENT 1



ISO/IEEE 11073-30200:2004/Amd 1:2015(E)



#### COPYRIGHT PROTECTED DOCUMENT

#### © IEEE 2015

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from ISO, IEC or IEEE at the respective address below.

ISO copyright office
Case postale 56
CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org
Published in Switzerland

IEC Central Office 3, rue de Varembé CH-1211 Geneva 20 Switzerland E-mail inmail@iec.ch Web www.iec.ch Institute of Electrical and Electronics Engineers, Inc. 3 Park Avenue, New York
NY 10016-5997, USA
E-mail stds.ipr@ieee.org
Web www.ieee.org

#### **Foreword**

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

IEEE Standards documents are developed within the IEEE Societies and the Standards Coordinating Committees of the IEEE Standards Association (IEEE-SA) Standards Board. The IEEE develops its standards through a consensus development process, approved by the American National Standards Institute, which brings together volunteers representing varied viewpoints and interests to achieve the final product. Volunteers are not necessarily members of the Institute and serve without compensation. While the IEEE administers the process and establishes rules to promote fairness in the consensus development process, the IEEE does not independently evaluate, test, or verify the accuracy of any of the information contained in its standards.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is called to the possibility that implementation of this standard may require the use of subject matter covered by patent rights. By publication of this standard, no position is taken with respect to the existence or validity of any patent rights in connection therewith. ISO/IEEE is not responsible for identifying essential patents or patent claims for which a license may be required, for conducting inquiries into the legal validity or scope of patents or patent claims or determining whether any licensing terms or conditions provided in connection with submission of a Letter of Assurance or a Patent Statement and Licensing Declaration Form, if any, or in any licensing agreements are reasonable or non-discriminatory. Users of this standard are expressly advised that determination of the validity of any patent rights, and the risk of infringement of such rights, is entirely their own responsibility. Further information may be obtained from ISO or the IEEE Standards Association.

Amendment 1 to ISO/IEEE 11073-30200:2004 was prepared by the 11073 Committee of the Engineering in Medicine and Biology Society of the IEEE (as IEEE 11073-30200a-2011). It was adopted by Technical Committee ISO/TC 215, *Health informatics*, in parallel with its approval by the ISO/IEC national bodies, under the "fast-track procedure" defined in the Partner Standards Development Organization cooperation agreement between ISO and IEEE. IEEE is responsible for the maintenance of this document with participation and input from ISO/IEC national bodies.



Health informatics—Point-of-care medical device communication

## Part 30200: Transport profile— Cable connected

### **Amendment 1**

IEEE Engineering in Medicine and Biology Society

Sponsored by the IEEE 11073™ Standards Committee

IEEE Std 11073-30200a<sup>™</sup>-2011

(Amendment to ISO/IEEE Std 11073-30200:2004)

Health informatics—Point-of-care medical device communication

## Part 30200: Transport profile—Cable connected

## **Amendment 1**

Sponsor

**IEEE 11073<sup>™</sup> Standards Committee** 

of the

**IEEE Engineering in Medicine and Biology Society** 

Approved 16 June 2011

**IEEE-SA Standards Board** 

**Abstract:** ISO/IEEE Std 11073-30200:2004 is extended in this amendment to include IEEE 802.3 100BASE-T and analysis of the compatibility of cable connections between ISO/IEEE Std 11073-30200:2004 and IEEE Std 802.3™-2008.

**Keywords:** bedside, IEEE 11073, IEEE Std 802.3-2008, Infrared Data Association (IrDA), legacy device, medical device, medical device communications, MIB, patient, SNTP

The Institute of Electrical and Electronics Engineers, Inc. 3 Park Avenue, New York, NY 10016-5997, USA
Copyright © 2011 by the Institute of Electrical and Electronics Engineers, Inc.
All rights reserved. Published 16 September 2011. Printed in the United States of America.

IEEE is a registered trademark in the U.S. Patent & Trademark Office, owned by the Institute of Electrical and Electronics Engineers, Incorporated.

PDF: ISBN 978-0-7381-6677-3 STD97123 Print: ISBN 978-0-7381-6678-0 STDPD97123 **IEEE Standards** documents are developed within the IEEE Societies and the Standards Coordinating Committees of the IEEE Standards Association (IEEE-SA) Standards Board. The IEEE develops its standards through a consensus development process, approved by the American National Standards Institute, which brings together volunteers representing varied viewpoints and interests to achieve the final product. Volunteers are not necessarily members of the Institute and serve without compensation. While the IEEE administers the process and establishes rules to promote fairness in the consensus development process, the IEEE does not independently evaluate, test, or verify the accuracy of any of the information or the soundness of any judgments contained in its standards.

Use of an IEEE Standard is wholly voluntary. The IEEE disclaims liability for any personal injury, property or other damage, of any nature whatsoever, whether special, indirect, consequential, or compensatory, directly or indirectly resulting from the publication, use of, or reliance upon this, or any other IEEE Standard document.

The IEEE does not warrant or represent the accuracy or content of the material contained herein, and expressly disclaims any express or implied warranty, including any implied warranty of merchantability or fitness for a specific purpose, or that the use of the material contained herein is free from patent infringement. IEEE Standards documents are supplied "AS IS."

The existence of an IEEE Standard does not imply that there are no other ways to produce, test, measure, purchase, market, or provide other goods and services related to the scope of the IEEE Standard. Furthermore, the viewpoint expressed at the time a standard is approved and issued is subject to change brought about through developments in the state of the art and comments received from users of the standard. Every IEEE Standard is subjected to review at least every five years for revision or reaffirmation, or every ten years for stabilization. When a document is more than five years old and has not been reaffirmed, or more than ten years old and has not been stabilized, it is reasonable to conclude that its contents, although still of some value, do not wholly reflect the present state of the art. Users are cautioned to check to determine that they have the latest edition of any IEEE Standard.

In publishing and making this document available, the IEEE is not suggesting or rendering professional or other services for, or on behalf of, any person or entity. Nor is the IEEE undertaking to perform any duty owed by any other person or entity to another. Any person utilizing this, and any other IEEE Standards document, should rely upon his or her independent judgment in the exercise of reasonable care in any given circumstances or, as appropriate, seek the advice of a competent professional in determining the appropriateness of a given IEEE standard.

Interpretations: Occasionally questions may arise regarding the meaning of portions of standards as they relate to specific applications. When the need for interpretations is brought to the attention of IEEE, the Institute will initiate action to prepare appropriate responses. Since IEEE Standards represent a consensus of concerned interests, it is important to ensure that any interpretation has also received the concurrence of a balance of interests. For this reason, IEEE and the members of its societies and Standards Coordinating Committees are not able to provide an instant response to interpretation requests except in those cases where the matter has previously received formal consideration. A statement, written or oral, that is not processed in accordance with the IEEE-SA Standards Board Operations Manual shall not be considered the official position of IEEE or any of its committees and shall not be considered to be, nor be relied upon as, a formal interpretation of the IEEE. At lectures, symposia, seminars, or educational courses, an individual presenting information on IEEE standards shall make it clear that his or her views should be considered the personal views of that individual rather than the formal position, explanation, or interpretation of the IEEE.

Comments for revision of IEEE Standards are welcome from any interested party, regardless of membership affiliation with IEEE. Suggestions for changes in documents should be in the form of a proposed change of text, together with appropriate supporting comments. Recommendations to change the status of a stabilized standard should include a rationale as to why a revision or withdrawal is required. Comments and recommendations on standards, and requests for interpretations should be addressed to:

Secretary, IEEE-SA Standards Board 445 Hoes Lane Piscataway, NJ 08854-4141 USA

Authorization to photocopy portions of any individual standard for internal or personal use is granted by The Institute of Electrical and Electronics Engineers, Inc., provided that the appropriate fee is paid to Copyright Clearance Center. To arrange for payment of licensing fee, please contact Copyright Clearance Center, Customer Service, 222 Rosewood Drive, Danvers, MA 01923 USA; +1 978 750 8400. Permission to photocopy portions of any individual standard for educational classroom use can also be obtained through the Copyright Clearance Center.

#### Introduction

This introduction is not part of IEEE Std 11073-30200a-2011, Health informatics—Point-of-care medical device communication—Part 30200: Transport profile—Cable connected—Amendment 1.

This amendment extends ISO/IEEE Std 11073-30200:2004 to include IEEE 802.3 100BASE-T, and it includes analysis of the compatibility of cable connections between ISO/IEEE Std 11073-30200:2004 and IEEE Std 802.3-2008 [B10].<sup>a</sup>

#### Notice to users

#### Laws and regulations

Users of these documents should consult all applicable laws and regulations. Compliance with the provisions of this standard does not imply compliance to any applicable regulatory requirements. Implementers of the standard are responsible for observing or referring to the applicable regulatory requirements. IEEE does not, by the publication of its standards, intend to urge action that is not in compliance with applicable laws, and these documents may not be construed as doing so.

#### Copyrights

This document is copyrighted by the IEEE. It is made available for a wide variety of both public and private uses. These include both use, by reference, in laws and regulations, and use in private self-regulation, standardization, and the promotion of engineering practices and methods. By making this document available for use and adoption by public authorities and private users, the IEEE does not waive any rights in copyright to this document.

#### **Updating of IEEE documents**

Users of IEEE standards should be aware that these documents may be superseded at any time by the issuance of new editions or may be amended from time to time through the issuance of amendments, corrigenda, or errata. An official IEEE document at any point in time consists of the current edition of the document together with any amendments, corrigenda, or errata then in effect. In order to determine whether a given document is the current edition and whether it has been amended through the issuance of amendments, corrigenda, or errata, visit the IEEE Standards Association web site at <a href="http://ieeexplore.ieee.org/xpl/standards.jsp">http://ieeexplore.ieee.org/xpl/standards.jsp</a>, or contact the IEEE at the address listed previously.

For more information about the IEEE Standards Association or the IEEE standards development process, visit the IEEE-SA web site at http://standards.ieee.org.

<sup>&</sup>lt;sup>a</sup> The numbers in brackets correspond to those of the bibliography in Annex P.

#### Errata

Errata, if any, for this and all other standards can be accessed at the following URL: http://standards.ieee.org/reading/ieee/updates/errata/index.html. Users are encouraged to check this URL for errata periodically.

#### Interpretations

Current interpretations can be accessed at the following URL: http://standards.ieee.org/reading/ieee/interp/index.html.

#### **Patents**

Attention is called to the possibility that implementation of this standard may require use of subject matter covered by patent rights. By publication of this standard, no position is taken with respect to the existence or validity of any patent rights in connection therewith. The IEEE is not responsible for identifying Essential Patent Claims for which a license may be required, for conducting inquiries into the legal validity or scope of Patents Claims or determining whether any licensing terms or conditions provided in connection with submission of a Letter of Assurance, if any, or in any licensing agreements are reasonable or non-discriminatory. Users of this standard are expressly advised that determination of the validity of any patent rights, and the risk of infringement of such rights, is entirely their own responsibility. Further information may be obtained from the IEEE Standards Association.

#### **Participants**

At the time this standard was submitted to the IEEE-SA Standards Board for approval, the InterLAN Working Group had the following membership:

Malcolm Clarke, Chair Mark Schnell, Vice Chair

Chuck Baker Nicolae Goga Paul Schluter Kai Hassing Douglas P. Bogia Rick Schrenker Jon Camp Stuart Higgins Seith Seidman Thomas Canup Nandu Kushalnagar Mazen Shihabi Randy Carroll Mike Miller Lars Steubesand Tony Chan Melvin Reynolds Stan Wiley Todd Cooper Shekar Roa Jan Wittenber Mark Craig Jr. Judi Romijn Tetsuya Yuda Juergen Fischbach Honggang Zhang

The following members of the individual balloting committee voted on this standard. Balloters may have voted for approval, disapproval, or abstention.

**Hugh Barrass** Atsushi Ito Bartien Sayogo Christopher Biernacki Raj Jain Gil Shultz Keith Chow Piotr Karocki James Smith Malcolm Clarke Randall Krohn Lars Steubesand Randall Groves William Lumpkins Walter Struppler Greg Luri Jan Wittenber Kai Hassing Werner Hoelzl Wayne W. Manges Oren Yuen

Melvin Reynolds

When the IEEE-SA Standards Board approved this standard on 16 June 2011, it had the following membership:

Richard H. Hulett, Chair John Kulick, Vice Chair Robert Grow, Past Chair Judith Gorman, Secretary

Masayuki Ariyoshi Gary Robinson Jim Hughes William Bartley Joseph L. Koepfinger\* Jon Rosdahl Ted Burse David Law Sam Sciacca Clint Chaplin Thomas Lee Mike Seavey Wael Diab Hung Ling Curtis Siller Jean-Philippe Faure Oleg Logvinov Phil Winston Ted Olsen Howard Wolfman Alex Gelman Paul Houzé Don Wright

\*Member Emeritus

#### STN EN ISO 11073-30200/A1: 2016

Also included are the following nonvoting IEEE-SA Standards Board liaisons:

Satish Aggarwal, NRC Representative Richard DeBlasio, DOE Representative Michael Janezic, NIST Representative

Don Messina
IEEE Standards Program Manager, Document Development

Kathryn M. Bennett
IEEE Standards Program Manager, Technical Program Development

#### **Contents**

1. Overview	. 2
3.1 Definitions	. 3
3.2 Acronyms and abbreviations	. 5
4. Goals for this standard	. 5
4.1 Compliance with other standards	. 5
6. Physical layer	. 5
Annex A (normative) Phyiscal layer	. 6
Annex E (informative) Detailed rationale for pin assignments	. 8
Annex F (informative) IEEE Std 802.3-2008 10BASE-T/100BASE-TX	. 9
	_
Annex O (informative) Analysis of compatibility between ISO/IEEE Std 11073-30200:2004 and 10BASE	
<u>T/100BASE-TX of IEEE Std 802.3-2008</u>	10
	_
Annex <b>Q</b> P (informative) Bibliography	36

#### Health informatics—Point-of-care medical device communication

# Part 30200: Transport profile—Cable connected

### **Amendment 1**

IMPORTANT NOTICE: This standard is not intended to ensure safety, security, health, or environmental protection. Implementers of the standard are responsible for determining appropriate safety, security, environmental, and health practices or regulatory requirements.

This IEEE document is made available for use subject to important notices and legal disclaimers. These notices and disclaimers appear in all publications containing this document and may be found under the heading "Important Notice" or "Important Notices and Disclaimers Concerning IEEE Documents." They can also be obtained on request from IEEE or viewed at <a href="http://standards.ieee.org/IPR/disclaimers.html">http://standards.ieee.org/IPR/disclaimers.html</a>.

NOTE—The editing instructions contained in this corrigendum define how to merge the material contained therein into the existing base standard and its amendments to form the comprehensive standard.

The editing instructions are shown in **bold italic**. Four editing instructions are used: change, delete, insert, and replace. **Change** is used to make corrections in existing text or tables. The editing instruction specifies the location of the change and describes what is being changed by using strikethrough (to remove old material) and <u>underscore</u> (to add new material). **Delete** removes existing material. **Insert** adds new material without disturbing the existing material. Insertions may require renumbering. If so, renumbering instructions are given in the editing instruction. **Replace** is used to make changes in figures or equations by removing the existing figure or equation and replacing it with a new one. Editing instructions, change markings, and this NOTE will not be carried over into future editions because the changes will be incorporated into the base standard. <sup>1</sup>

### koniec náhľadu – text ďalej pokračuje v platenej verzii STN

<sup>1</sup> Notes in text, tables, and figures are given for information only and do not contain requirements needed to implement the standard.