

INTERNATIONAL STANDARD

ISO/IEEE 11073-10441

First edition
2015-03-01

Health informatics — Personal health device communication —

Part 10441: Device specialization — Cardiovascular fitness and activity monitor

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Informatique de santé — Communication entre dispositifs de santé personnels —

Partie 10441. Spécialisation des dispositifs — Moniteur d'activité et de forme cardiovasculaire

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Reference number
ISO/IEEE 11073-10441:2015(E)

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Published in Switzerland

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ISO/IEEE 11073 consists of the following parts, under the general title *Health informatics — Personal health device communication* (text in parentheses gives a variant of subtitle):

- *Part 00103: Overview*
- *Part 10101: (Point-of-care medical device communication) Nomenclature*
- *Part 10102: (Point-of-care medical device communication) Nomenclature — Annotated ECG*
- *Part 10103: (Point-of-care medical device communication) — Nomenclature — Implantable device, cardiac*
- *Part 10201: (Point-of-care medical device communication) Domain information model*
- *Part 10404: Device specialization — Pulse oximeter*

- Part 10406: Device specialization — Basic electrocardiograph (ECG) (1- to 3-lead ECG)
- Part 10407: Device specialization — Blood pressure monitor
- Part 10408: Device specialization — Thermometer
- Part 10415: Device specialization — Weighing scale
- Part 10417: Device specialization — Glucose meter
- Part 10418: Device specialization — International Normalized Ratio (INR) monitor
- Part 10420: Device specialization — Body composition analyzer
- Part 10421: Device specialization — Peak expiratory flow monitor (peak flow)
- Part 10441: Device specialization — Cardiovascular fitness and activity monitor
- Part 10442: (Point-of-care medical device communication) Device specialization — Strength fitness equipment
- Part 10471: Device specialization — Independent living activity hub
- Part 10472: Device specialization — Medication monitor
- Part 20101: (Point-of-care medical device communication) Application profiles — Base standard
- Part 20601: Application profile — Optimized exchange protocol
- Part 30200: (Point-of-care medical device communication) Transport profile — Cable connected
- Part 30300: (Point-of-care medical device communication) Transport profile — Infrared wireless
- Part 30400: (Point-of-care medical device communication) Interface profile — Cabled Ethernet
- Part 90101: (Point-of-care medical device communication) Analytical instruments — Point-of-care test
- Part 91064: (Standard communication protocol) Computer-assisted electrocardiography
- Part 92001: (Medical waveform format) — Encoding rules

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Health Informatics—Personal health device communication

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IEEE Std 11073-10441™-2013
(Revision of
IEEE Std 11073-10441-2008)

29 March 2013

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Approved 6 February 2013

IEEE-SA Standards Board

Abstract: Within the context of the ISO/IEEE 11073 family of standards for device communication, a normative definition of communication between personal telehealth cardiovascular fitness and activity monitor devices and managers (e.g., cell phones, personal computers, personal health appliances, and set top boxes) is established in this standard in a manner that enables plug-and-play interoperability. Appropriate portions of existing standards are leveraged including ISO/IEEE 11073 terminology, information models, application profile standards, and transport standards. The use of specific term codes, formats, and behaviors in telehealth environments restricting optionality in base frameworks in favor of interoperability is specified. A common core of communication functionality for personal telehealth cardiovascular fitness and activity monitor devices is defined in this standard.

Keywords: activity monitor, cardiovascular fitness, IEEE 11073-10441™, medical device communication, personal health devices

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PDF: ISBN 978-0-7381-8267-4 **STD98161**
Print: ISBN 978-0-7381-8268-1 **STDPD98161**

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Introduction

This introduction is not part of IEEE Std 11073-10441-2013, IEEE Standard for Health informatics—Personal health device communication—Device specialization—Cardiovascular fitness and activity monitor.

ISO/IEEE 11073 standards enable communication between medical devices and external computer systems. This document uses the optimized framework created in IEEE Std 11073-20601a™-2010^a and describes a specific, interoperable communication approach for cardiovascular fitness and activity monitors. These standards align with, and draw on, the existing clinically focused standards to provide easy management of data from either a clinical or a personal health device.

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