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**Health informatics — Personal health  
device communication —**

**Part 10442:  
Device specialization — Strength fitness  
equipment**

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

*Partie 10442: Spécialisation des dispositifs — Équipement de mise en  
forme musculaire*



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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*

## ISO/IEEE 11073-10442:2015(E)

- 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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**Abstract:** Within the context of the ISO/IEEE 11073 family of standards for device communication, this standard establishes a normative definition of the communication between personal strength fitness devices and managers (e.g., cell phones, personal computers, personal health appliances, and set top boxes) in a manner that enables plug-and-play interoperability. It leverages appropriate portions of existing standards including ISO/IEEE 11073 terminology and information models. It specifies the use of specific term codes, formats, and behaviors in telehealth environments restricting optionality in base frameworks in favor of interoperability. This standard defines a common core of communication functionality for personal telehealth strength fitness devices. In this context, strength fitness devices are being used broadly to cover strength fitness devices that measure musculo-skeletal strength-conditioning activities.

**Keywords:** medical device communication, personal health devices, strength fitness equipment

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## Introduction

This introduction is not part of IEEE Std 11073-10442-2008, Health informatics—Personal health device communication—Part 10442: Device specialization—Strength fitness equipment.

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

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