



BSI Standards Publication

## Health informatics — Device interoperability

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Personal health device communication — Device specialization — Thermometer

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## National foreword

This British Standard is the UK implementation of EN ISO/IEEE 11073-10408:2022. It is identical to ISO/IEEE 11073-10408:2022. It supersedes BS EN ISO 11073-10408:2011, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee IST/35, Health informatics.

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### Amendments/corrigenda issued since publication

Date	Text affected
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## EUROPÄISCHE NORM

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Supersedes EN ISO 11073-10408:2011

English Version

### Health informatics - Device interoperability - Part 10408: Personal health device communication - Device specialization - Thermometer (ISO/IEEE 11073- 10408:2022)

Informatique de santé - Interopérabilité des dispositifs  
- Partie 10408: Communication entre dispositifs de  
santé personnels - Spécialisation des dispositifs -  
Thermomètre (ISO/IEEE 11073-10408:2022)

Medizinische Informatik - Kommunikation von Geräten  
für die persönliche Gesundheit - Teil 10408:  
Gerätespezifikation - Thermometer (ISO/IEEE 11073-  
10408:2022)

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This second edition cancels and replaces the first edition (ISO/IEEE 11073-10408:2010), which has been technically revised.

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(Revision of IEEE Std 11073-10408-2008)

**Health informatics—Personal health device communication**  
**Part 10408: Device specialization—**  
**Thermometer**

Developed by the

**IEEE 11073™ Standards Committee**  
of the  
**IEEE Engineering in Medicine and Biology Society**

Approved 7 November 2019

**IEEE SA Standards Board**

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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 communication between personal telehealth thermometer devices and compute engines (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, information models, application profile standards, and transport standards. 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 thermometer devices.

**Keywords:** IEEE 11073-10408™, medical device communication, personal health devices, thermometer

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Charles R. Abbruscato  
Nabil Abujbara  
Maher Abuzaid  
James Agnew  
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Sunlee Bang  
M. Jonathan Barkley  
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John Bell  
Rudy Belliardi  
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George A. Bertos  
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Lyle G. Bullock, Jr.  
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Jeremy Byford-Rew  
Satya Calloji  
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Carole C. Carey  
Craig Carlson  
Santiago Carot-Nemesio  
Randy W. Carroll  
Simon Carter  
Seungchul Chae  
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Wenjuan Chen

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Brian Dubreuil  
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Jakob Ehrensvarð  
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Javier Escayola Calvo  
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Leonardo Estevez  
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Alan Godfrey  
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Charles M. Gropper  
Amit Gupta  
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## Introduction

This introduction is not part of IEEE Std 11073-10408-2019, Health informatics—Personal health device communication—Part 10408: Device specialization—Thermometer.

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 thermometers. These standards align with and draw on the existing clinically focused standards to provide support for communication of data from clinical or personal health devices.

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<sup>a</sup> Information on references can be found in Clause 2.

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## Health informatics—Personal health device communication

# Part 10408: Device specialization— Thermometer

### 1. Overview

#### 1.1 Scope

Within the context of the ISO/IEEE 11073 family of standards for device communication, this standard establishes a normative definition of communication between personal telehealth thermometer devices and compute engines (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, information models, application profile standards, and transport standards. 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 thermometers.

#### 1.2 Purpose

This standard addresses a need for an openly defined, independent standard for controlling information exchange to and from personal health devices and compute engines (e.g., cell phones, personal computers, personal health appliances, and set top boxes). Interoperability is the key to growing the potential market for these devices and to enabling people to be better informed participants in the management of their health.

#### 1.3 Context

See IEEE Std 11073-20601™ for an overview of the environment within which this standard is written.<sup>1</sup>

This document, IEEE Std 11073-10408, defines the device specialization for the thermometer, being a specific agent type, and it provides a description of the device concepts, its capabilities, and its implementation according to this standard.

This standard is based on IEEE Std 11073-20601, which in turn draws information from both ISO/IEEE 11073-10201:2004 [B6] and ISO/IEEE 11073-20101:2004 [B7].<sup>2</sup> The medical device encoding rules (MDERs) used within this standard are fully described in IEEE Std 11073-20601.

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<sup>1</sup> Information on normative references can be found in Clause 2.

<sup>2</sup> The numbers in brackets correspond to the numbers of the bibliography in Annex A.