INTERNATIONAL STANDARD **ISO/IEEE 11073-40102**

First edition
2022-03

Health informatics — Device interoperability —

Part 40102: Foundational — Cybersecurity — Capabilities for mitigation

Informatique de santé — Interopérabilité des dispositifs —

Partie 40102: Fondamentaux — Cybersécurité — Capacités d'atténuation

Reference number
ISO/IEEE 11073-40102:2022(E)

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IEEE Std 11073-40102™-2020

Health informatics—Device interoperability

Part 40102: Foundational—Cybersecurity—Capabilities for mitigation

Developed by the

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

Approved 24 September 2020

IEEE SA Standards Board

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Abstract: For Personal Health Devices (PHDs) and Point-of-Care Devices (PoCDs), a security baseline of application layer cybersecurity mitigation techniques is defined by this standard for certain use cases or for times when certain criteria are met. The mitigation techniques are based on an extended confidentiality, integrity, and availability (CIA) triad and are described generally to allow manufacturers to determine the most appropriate algorithms and implementations. A scalable information security toolbox appropriate for PHD/PoCD interfaces is specified that fulfills the intersection of requirements and recommendations from the National Institute of Standards and Technology (NIST) and the European Network and Information Security Agency (ENISA). A mapping of this standard to the NIST cybersecurity framework; IEC TR 80001-2-2; and the Spoofing, Tampering, Repudiation, Information Disclosure, Denial of Service, and Elevation of Privilege (STRIDE) classification scheme is defined.

Keywords: cybersecurity, IEEE 11073-40102™, medical device communication, mitigation techniques, Personal Health Devices, Point-of-Care Devices

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PDF: ISBN 978-1-5044-7088-9 STD24424
Print: ISBN 978-1-5044-7089-6 STDPD24424

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