International Standard

ISO/IEC 19369

Information technology — Telecommunications and information exchange between systems — NFCIP-2 test methods

Technologies de l'information — Téléinformatique — Méthodes d'essai NFCIP-2

Second edition
2024-09

Reference number
ISO/IEC 19369:2024(en)

© ISO/IEC 2024



COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2024

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword ... **iv**
1 Scope ... **1**
2 Normative references ... **1**
3 Terms and definitions ... **1**
4 Symbols and abbreviated terms ... **2**
5 Test environment and apparatus ... **2**
6 Tests ... **3**
6.1 Testing of external RF field detection and RF field generation ... 3
6.2 Testing of mode selection and switching ... 3
6.2.1 General ... 3
6.2.2 Test PICC mode ... 4
6.2.3 Test PCD mode ... 4
6.2.4 Test VCD mode ... 4
6.2.5 Test NFC mode — Target and initiator ... 4
6.3 Capturing of test results ... 4
Annex A (normative) **Test report template** ... **5**
Bibliography ... **6**

© ISO/IEC 2024 – All rights reserved

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives or www.iec.ch/members_experts/refdocs).

ISO and IEC draw attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO and IEC take no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO and IEC had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents and https://patents.iec.ch. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html. In the IEC, see www.iec.ch/understanding-standards.

This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 6, *Telecommunications and information exchange between systems*.

This second edition cancels and replaces the first edition (ISO/IEC 19369:2014), which has been technically revised.

The main changes are as follows:

— Clause 3 was added;

— test methods were adapted to align with ISO/IEC 21481;

— Annex A was added.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html and www.iec.ch/national-committees.

© ISO/IEC 2024 – All rights reserved

Information technology — Telecommunications and information exchange between systems — NFCIP-2 test methods

1 Scope

This document specifies test methods for ISO/IEC 21481 in addition to applicable test methods specified in ISO/IEC 10373-6, ISO/IEC 10373-7 and ISO/IEC 23917.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 9646 (all parts), *Information technology — Open Systems Interconnection — Conformance testing methodology and framework*

ISO/IEC 10373-6, *Cards and security devices for personal identification — Test methods — Part 6: Contactless proximity objects*

ISO/IEC 10373-7, *Cards and security devices for personal identification — Test methods — Part 7: Contactless vicinity objects*

ISO/IEC 14443-3, *Cards and security devices for personal identification — Contactless proximity objects — Part 3: Initialization and anticollision*

ISO/IEC 15693-2, *Cards and security devices for personal identification — Contactless vicinity objects — Part 2: Air interface and initialization*

ISO/IEC 15693-3, *Cards and security devices for personal identification — Contactless vicinity objects — Part 3: Anticollision and transmission protocol*

ISO/IEC 21481:2021, *Information technology — Telecommunications and information exchange between systems — Near field communication interface and protocol 2 (NFCIP-2)*

ISO/IEC 23917, *Telecommunications and information exchange between systems — Near Field Communication Interface and Protocol 1 (NFCIP-1) — Protocol test methods*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
PICC mode emulator
functionality to behave as proximity card or object (PICC) mode

Note 1 to entry: PICC mode is specified in ISO/IEC 14443-2, ISO/IEC 14443-3 and ISO/IEC 14443-4.

© ISO/IEC 2024 – All rights reserved