

AS ISO/IEC 14443.2:2022
ISO/IEC 14443-2:2020
ISO/IEC 14443-2:2020/Amd 1:2021
ISO/IEC 14443-2:2020/Cor 1:2021



Cards and security devices for personal identification — Contactless proximity objects

Part 2: Radio frequency power and signal interface



AS ISO/IEC 14443.2:2022

This Australian Standard ® was prepared by IT-017, Cards and security devices for personal identification. It was approved on behalf of the Council of Standards Australia on 7 June 2022.

This Standard was published on 24 June 2022.

The following are represented on Committee IT-017:

- Australia Post
- Australian Hotels Association
- Australian Industry Group
- Australian Passport Office
- Australian Security Industry Association
- Department of Home Affairs — Identity and Biometrics Division
- Department of Transport and Main Roads, QLD

This Standard was issued in draft form for comment as DR AS ISO/IEC 14443.2:2022.

Keeping Standards up-to-date

Ensure you have the latest versions of our publications and keep up-to-date about Amendments, Rulings, Withdrawals, and new projects by visiting:

www.standards.org.au

AS ISO/IEC 14443.2:2022
ISO/IEC 14443-2:2020
ISO/IEC 14443-2:2020/Amd 1:2021
ISO/IEC 14443-2:2020/Cor 1:2021

Cards and security devices for personal identification — Contactless proximity objects

Part 2: Radio frequency power and signal interface

Originated as AS 14443.2—2003.
Second edition 2022.

COPYRIGHT

© ISO/IEC 2022 — All rights reserved
© Standards Australia Limited 2022

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher, unless otherwise permitted under the Copyright Act 1968 (Cth).

Preface

This Standard was prepared by the Standards Australia Committee IT-017, Cards and security devices for personal identification, to supersede AS 14443.2:2003, *Identification cards — Contactless integrated circuit(s) cards — Proximity cards, Part 2: Radio frequency power and signal interface*.

The objective of this document is to specify the characteristics of the fields to be provided for power and bi-directional communication between proximity coupling devices (PCDs) and proximity cards or objects (PICCs).

This document does not specify the means of generating coupling fields, nor the means of compliance with electromagnetic radiation and human exposure regulations, which can vary depending on the country.

This document is identical with, and has been reproduced from, ISO/IEC 14443-2:2020, *Cards and security devices for personal identification — Contactless proximity objects — Part 2: Radio frequency power and signal interface* and its Amendment No. 1 (2021) and Corrigendum No. 1 (2021) which have been added at the end of the source text.

As this document has been reproduced from an International document, a full point substitutes for a comma when referring to a decimal marker.

Australian or Australian/New Zealand Standards that are identical adoptions of international normative references may be used interchangeably. Refer to the online catalogue for information on specific Standards.

The terms “normative” and “informative” are used in Standards to define the application of the appendices or annexes to which they apply. A “normative” appendix or annex is an integral part of a Standard, whereas an “informative” appendix or annex is only for information and guidance.

Contents

Preface	ii
Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Symbols and abbreviated terms	2
5 General considerations	5
5.1 Initial dialogue	5
5.2 Compliance	5
5.2.1 PICC compliance	5
5.2.2 PCD compliance	5
6 Power transfer	6
6.1 General	6
6.2 Frequency	6
6.3 Operating field strength	6
7 Signal interface	7
8 Communication signal interface Type A	9
8.1 Communication PCD to PICC	9
8.1.1 Bit rate	9
8.1.2 Modulation	9
8.1.3 Bit representation and coding	18
8.2 Communication PICC to PCD	23
8.2.1 Bit rate	23
8.2.2 PICC load modulation transmission	23
8.2.3 Subcarrier	28
8.2.4 Subcarrier modulation	28
8.2.5 PCD load modulation reception	29
8.2.6 Bit representation and coding	32
9 Communication signal interface Type B	34
9.1 Communication PCD to PICC	34
9.1.1 Bit rate	34
9.1.2 Modulation for bit rates of $f_c/128$, $f_c/64$, $f_c/32$, $f_c/16$, $f_c/8$, $f_c/4$, and $f_c/2$	34
9.1.3 Bit representation and coding	43
9.2 Communication PICC to PCD	44
9.2.1 Bit rate	44
9.2.2 PICC load modulation transmission	44
9.2.3 Subcarrier	44
9.2.4 Subcarrier modulation	44
9.2.5 PCD load modulation reception	44
9.2.6 Bit representation and coding	44
10 Electromagnetic disturbance levels	44
10.1 PCD limits	44
10.2 PICC limits	45
Annex A (informative) Complex envelope and constellation diagram	46
Annex B (informative) Inter symbol interference	47
Bibliography	49
Amendment 1	50

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-