

This is a preview of "ISO 13491-2:2005". [Click here to purchase the full version from the ANSI store.](#)

Second edition
2005-06-15

Banking — Secure cryptographic devices (retail) —

Part 2:

Security compliance checklists for devices used in financial transactions

Banque — Dispositifs cryptographiques de sécurité (services aux particuliers) —

Partie 2: Listes de contrôle de conformité de sécurité pour les dispositifs utilisés dans les transactions financières



Reference number
ISO 13491-2:2005(E)

© ISO 2005

This is a preview of "ISO 13491-2:2005". [Click here to purchase the full version from the ANSI store.](#)

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

© ISO 2005

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

This is a preview of "ISO 13491-2:2005". [Click here to purchase the full version from the ANSI store.](#)

Contents

Page

| | |
|---|-----------|
| Foreword | iv |
| Introduction | v |
| 1 Scope | 1 |
| 2 Normative references | 1 |
| 3 Terms and definitions | 1 |
| 4 Use of security compliance checklists | 2 |
| Annex A (normative) Physical, logical and device management characteristics common to all secure cryptographic devices | 4 |
| Annex B (normative) Devices with PIN entry functionality | 11 |
| Annex C (normative) Devices with PIN management functionality | 15 |
| Annex D (normative) Devices with message authentication functionality | 17 |
| Annex E (normative) Devices with key generation functionality | 18 |
| Annex F (normative) Devices with key transfer and loading functionality | 22 |
| Annex G (normative) Devices with digital signature functionality | 26 |
| Annex H (normative) Categorization of environments | 28 |
| Bibliography | 31 |

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 13491-2 was prepared by Technical Committee ISO/TC 68, *Financial services*, Subcommittee SC 2, *Security management and general banking operations*.

This second edition cancels and replaces the first edition (ISO 13491-2:2000) which has been technically revised.

ISO 13491 consists of the following parts, under the general title *Banking — Secure cryptographic devices (retail)*:

- *Part 1: Concepts, requirements and evaluation methods*
- *Part 2: Security compliance checklists for devices used in financial transactions*

This is a preview of "ISO 13491-2:2005". [Click here to purchase the full version from the ANSI store.](#)

Introduction

This part of ISO 13491 specifies both the physical and logical characteristics and the management of the secure cryptographic devices (SCDs) used to protect messages, cryptographic keys and other sensitive information used in a retail financial services environment.

The security of retail financial services is largely dependent upon the security of these cryptographic devices.

Security requirements are based upon the premise that computer files can be accessed and manipulated, communication lines can be "tapped" and authorized data or control inputs in a system device can be replaced with unauthorized inputs. While certain cryptographic devices (e.g. host security modules) reside in relatively high-security processing centres, a large proportion of cryptographic devices used in retail financial services (e.g., PIN entry devices etc.) now reside in non-secure environments. Therefore when PINs, MACs, cryptographic keys and other sensitive data are processed in these devices, there is a risk that the devices may be tampered with or otherwise compromised to disclose or modify such data.

It must be ensured that the risk of financial loss is reduced through the appropriate use of cryptographic devices that have proper physical and logical security characteristics and are properly managed. To ensure that SCDs have the proper physical and logical security, they require evaluation.

This part of ISO 13491 provides the security compliance checklists for evaluating SCDs used in financial services systems in accordance with ISO 13491-1. Other evaluation frameworks exist and may be appropriate for formal security evaluations e.g. parts 1 to 3 of ISO/IEC 15408 and ISO/IEC 19790, and are outside the scope of this part of ISO 13491.

Appropriate device characteristics are necessary to ensure that the device has the proper operational capabilities and provides adequate protection for the data it contains. Appropriate device management is necessary to ensure that the device is legitimate, that it has not been modified in an unauthorized manner, e.g. by "bugging", and that any sensitive data placed within the device (e.g. cryptographic keys) have not been subject to disclosure or change.

Absolute security is not practically achievable. Cryptographic security depends upon each life cycle phase of the SCD and the complementary combination of appropriate device management procedures and secure cryptographic characteristics. These management procedures implement preventive measures to reduce the opportunity for a breach of cryptographic device security. These measures aim for a high probability of detection of any illicit access to sensitive or confidential data in the event that device characteristics fail to prevent or detect the security compromise.