

Irish Standard I.S. EN ISO 15423:2010

Information technology - Automatic identification and data capture techniques - Bar code scanner and decoder performance testing (ISO/IEC 15423:2009)

© NSAI 2010

No copying without NSAI permission except as permitted by copyright law.

Incorporating amendments/corrigenda/National Annexes issued since publication:		

# The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

*This document replaces:* EN ISO 15423:2005

This document is based on: EN ISO 15423:2010

EN ISO 15423:2005

Published:

1 September, 2010 27 July, 2005

This document was published under the authority of the NSAI and comes into effect on: 16 September, 2010 ICS number: 35.040

NSAI

1 Swift Square, Northwood, Santry Dublin 9 T +353 1 807 3800

F +353 1 807 3838 E standards@nsai.ie

W NSAl.ie

Sales:

T +353 1 857 6730 F +353 1 857 6729 W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

# EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

**EN ISO 15423** 

September 2010

ICS 35.040

Supersedes EN ISO/IEC 15423:2005

#### **English Version**

# Information technology - Automatic identification and data capture techniques - Bar code scanner and decoder performance testing (ISO/IEC 15423:2009)

Technologies de l'information - Techniques automatiques d'identification et de capture des données - Contrôle de scanner de code à barres et de performance du décodeur (ISO/IEC 15423:2009)

Informationstechnik - Automatische Identifikation und Datenerfassungsverfahren - Leistungsanforderungen an Strichcode-Scanner und -Decoder (ISO/IEC 15423:2009)

This European Standard was approved by CEN on 12 August 2010.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

### EN ISO/IEC 15423:2010 (E)

Contents	Page
Foreword	3

EN ISO/IEC 15423:2010 (E)

#### **Foreword**

The text of ISO/IEC 15423:2009 has been prepared by Technical Committee ISO/IEC/JTC 1 "Information technology" of the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) and has been taken over as EN ISO/IEC 15423:2010 by Technical Committee CEN/TC 225 "AIDC technologies" the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 2011, and conflicting national standards shall be withdrawn at the latest by March 2011.

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

This document supersedes EN ISO/IEC 15423:2005.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

#### **Endorsement notice**

The text of ISO/IEC 15423:2009 has been approved by CEN as a EN ISO/IEC 15423:2010 without any modification.

This is a free page sample. Access the full version online.

I.S. EN ISO 15423:2010

This page is intentionally left BLANK.

This is a free page sample. Access the full version online.

## I.S. EN ISO 15423:2010 INTERNATIONAL STANDARD

150/IEC 15423

Second edition 2009-11-15

# Information technology — Automatic identification and data capture techniques — Bar code scanner and decoder performance testing

Technologies de l'information — Techniques automatiques d'identification et de capture des données — Contrôle de scanner de code à barres et de performance du décodeur



#### ISO/IEC 15423:2009(E)

#### 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.



#### COPYRIGHT PROTECTED DOCUMENT

#### © ISO/IEC 2009

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

#### ISO/IEC 15423:2009(E)

Contents		Page
Forev	eword	iv
Intro	oduction	ν
1	Scope	1
2	Normative references	1
3	Terms and definitions	2
4	Abbreviated terms	5
5 5.1 5.2 5.3	Categories of scanning equipment  Scanners with single-axis reading diagram  Scanners with two-axis reading diagram  Scanners with three-axis reading diagram	6 6
6 6.1 6.2 6.3 6.4 6.5 6.6 6.7	Test requirements Test methods Selection of equipment for testing Test conditions Test charts Test equipment Test eriteria Parameters to be tested and test methods Test report	
7 8 8.1 8.2 8.3 8.4 8.5 8.6	Certification and labelling  Equipment specification  General  Scanner/decoder interface  Human interface  Computer interface  Digital input and output (I/O)  Programming and configuration	
	ex A (normative) General operational requirements	
Anne	ex B (informative) Classification of scanners	31
Anne	ex C (informative) Example of decodability calculation	37
Biblio	iography	39

Contents

ISO/IEC 15423:2009(E)

#### **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. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

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

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national 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 and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 15423 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 31, *Automatic identification and data capture techniques*.

This second edition cancels and replaces the first edition (ISO/IEC 15423:2004), which has been technically revised.

ISO/IEC 15423:2009(E)

#### Introduction

The technology of bar coding is based on the recognition of patterns encoded in bars and spaces of defined dimensions or arrangements of marks in matrix patterns both of which are constructed according to rules defining the translation of characters into such patterns, known as the symbology specification.

Bar code symbols can be produced with a wide variety of printing and other techniques, and the overall symbol dimensions can be uniformly scaled to suit particular requirements.

There is a wide range of bar code reading equipment using various scanning techniques, which enable bar code symbols to be read under many different conditions.

Bar code symbols may be

- a) "linear" i.e. read in a single dimension, where the height of the bars provides redundancy of information, or
- b) "two dimensional", either in stacked rows to be read unidimensionally with multiple scans, or as a matrix of elements requiring two dimensional reading.

Bar code reading equipment must be capable of reliably converting the information represented as a bar code symbol into a form meaningful to the host computer system or otherwise to the user.

Manufacturers of bar code equipment, the producers of bar code symbols and the users of bar code technology require publicly available standard test specifications for bar code reading equipment to ensure the accuracy and consistency of performance of this equipment.

This is a free page sample. Access the full version online.

I.S. EN ISO 15423:2010



**Product Page** 

- Dooking for additional Standards? Visit Intertek Inform Infostore
- Dearn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation