



**International
Standard**

ISO/IEC 15424

**Information technology —
Automatic identification and data
capture techniques — Data carrier
identifiers (including symbology
identifiers)**

*Technologies de l'information — Techniques automatiques
d'identification et de capture des données — Identifiants de
porteuses de données (y compris les identifiants de symbologie)*

**Third edition
2025-02**



COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2025

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	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms, definitions and abbreviated terms	1
3.1 Terms and definitions	1
3.2 Abbreviated terms	2
4 Requirements	2
4.1 Applicability.....	2
4.2 Structure.....	2
4.3 Code characters.....	2
4.4 Modifier character.....	3
4.4.1 General.....	3
4.4.2 Code 39 — Code character: A.....	4
4.4.3 Telepen — Code character: B.....	4
4.4.4 Code 128 — Code character: C.....	4
4.4.5 Channel code — Code character: c.....	4
4.4.6 Code One — Code character: D.....	5
4.4.7 Data Matrix and DMRE — Code character: d.....	5
4.4.8 EAN/UPC — Code character: E.....	5
4.4.9 GS1 DataBar and GS1 Composite symbology — Code character: e.....	6
4.4.10 Codabar — Code character: F.....	6
4.4.11 Code 93 and 93i — Code character: G.....	6
4.4.12 Grid Matrix — Code character: g.....	7
4.4.13 Code 11 — Code character: H.....	7
4.4.14 Han Xin Code — Code character: h.....	7
4.4.15 Interleaved 2 of 5 — Code character: I.....	7
4.4.16 DotCode — Code character: J.....	8
4.4.17 JAB Code — Code character: j.....	8
4.4.18 Code 16K — Code character: K.....	8
4.4.19 PDF417 and MicroPDF417 — Code character: L.....	8
4.4.20 MSI — Code character: M.....	9
4.4.21 Modulated height postal — Code character: m.....	9
4.4.22 Anker Code — Code character: N.....	9
4.4.23 Codablock — Code character: O.....	9
4.4.24 OCR — Code character: o.....	10
4.4.25 Plessey Code — Code character: P.....	10
4.4.26 PosiCode — Code character: p.....	10
4.4.27 QR Code or rMQR — Code character: Q.....	10
4.4.28 Straight 2 of 5 (with two bar start/stop codes) — Code character: R.....	10
4.4.29 Datastrip 2D — Code character: r.....	11
4.4.30 Straight 2 of 5 (with three bar start/stop codes) — Code character: S.....	11
4.4.31 SuperCode — Code character: s.....	11
4.4.32 Code 49 — Code character: T.....	11
4.4.33 MaxiCode — Code character: U.....	11
4.4.34 Ultracode — Code character: u.....	12
4.4.35 DMRC Code — Code character: W.....	12
4.4.36 Other bar code — Code character: X.....	12
4.4.37 System expansion — Code character: Y.....	12
4.4.38 Non-bar code — Code character: Z.....	12
4.4.39 Aztec Code and Aztec Mesas — Code character: z.....	13
Annex A (normative) Symbology emulation	14

ISO/IEC 15424:2025(en)

Annex B (normative) Symbology identifiers for GS1 application syntax or AIM application specification indicators	15
Annex C (informative) Reference documents	16
Annex D (normative) AIM application specification indicators	18
Bibliography	19

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 31, *Automatic identification and data capture techniques*.

This third edition cancels and replaces the second edition (ISO/IEC 15424:2008), which has been technically revised.

The main changes are as follows:

- several new symbologies have been added;
- references to AIM as a registration authority have been removed;
- the extension method has been simplified.

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.

Introduction

There is a need to identify the data carrier that a reader detects in autodiscrimination environments. The symbology identifier concept provides a standardized way for a device receiving data from a reader to differentiate between the data carriers. This document deals mostly with bar code symbologies; the terms symbology identifier, symbology and bar code are therefore used throughout this document although they are intended to apply to other data carriers as well.

This identification is achieved by the addition of an optional feature to readers enabling the reader to prefix a standard string of characters to data messages. This preamble contains information about the decoded symbol (or other data carrier) and any processing the reader has done. The information is not encoded or otherwise explicitly or implicitly represented in the symbol, except that the presence of some optional features can be detected by the reading equipment, whereas others require the reader to be expressly configured to implement them.

This document identifies symbologies for which a symbology specification

- is published in international standardization organisations, such as ISO, IEC and AIM Inc., or
- is proprietary but used in public applications.

In addition, there is a fixed number of symbologies which do not have a full standard but do have a reference document available from AIM Inc. These symbologies are included in this document because of their historical usage.

This document is intended to be read in conjunction with the relevant symbology specifications.

Information technology — Automatic identification and data capture techniques — Data carrier identifiers (including symbology identifiers)

1 Scope

This document specifies the preamble message generated by the reader and interpretable by the receiving system, which indicates the bar code symbology or other origin of transmitted data, together with details of certain specified optional processing features associated with the data message.

This document applies to automatic identification device communication conventions and standardizes the reporting of data carriers from bar code readers and other automatic identification equipment.

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 19762, *Information technology — Automatic identification and data capture (AIDC) techniques — Harmonized vocabulary*