



International  
Standard

**ISO/IEC 15420**

**Information technology —  
Automatic identification and data  
capture techniques — EAN/UPC bar  
code symbology specification**

*Technologies de l'information — Techniques automatiques  
d'identification et de capture des données — Spécification de  
symbologie de code à barres EAN/UPC*

**Third edition**

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Published in Switzerland

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## 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](http://www.iso.org/directives) or [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs)).

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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 15420:2009), which has been technically revised.

The main changes are as follows:

- terminology and dimensions have been updated to align with latest GS1 General Specifications;
- clarification on what is defined in this document compared to an application standard has been added;
- example barcodes have been revised to use GS1 company prefixes reserved for examples;
- verification lighting has been changed from 670 nm to 660 nm to align with GS1 General Specifications.

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](http://www.iso.org/members.html) and [www.iec.ch/national-committees](http://www.iec.ch/national-committees).

## Introduction

The technology of bar coding is based on the recognition of patterns encoded in bars and spaces of defined dimensions. There are numerous methods of encoding information in bar code form, known as symbologies. EAN/UPC is one such symbology. The rules defining the translation of characters into bar and space patterns, and other essential features of each symbology, are known as the symbology specification.

This document is intended to be used alongside the GS1 General Specifications. The administration of the numbering system by GS1 ensures that identification codes assigned to particular items are unique worldwide and are defined in a consistent way. The major benefit for the users of the GS1 system<sup>1)</sup> is the availability of uniquely defined identification codes for use in their trading transactions. [Annex C](#) gives an overview of the GS1 system.

NOTE GS1 is the worldwide association encompassing the organizations formerly known as EAN International and Uniform Code Council (UCC).

Manufacturers of bar code equipment and users of bar code technology require publicly available standard symbology specifications to which they can refer when developing equipment and software.

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1) The GS1 system are specifications, standards, and guidelines administered by GS1.

