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**Information technology — Automatic  
identification and data capture  
techniques — Bar code digital imaging  
and printing performance testing**

*Technologies de l'information — Techniques automatiques  
d'identification et de capture des données — Test de performance de la  
numérisation digitale et l'impression des codes à barres*

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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. 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 15419 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 15419:2001), which has been technically revised.

## Introduction

Bar code technology is based on the recognition of patterns encoded in bars and spaces of defined dimensions according to rules defining the translation of characters into such patterns, known as the symbology specification.

Bar code digital imaging systems must be capable of reliably converting the information to be encoded into a bar code symbol meeting the symbology specification and application requirements if the technology is to fulfil its basic objective. Such systems comprise two major components, namely the hardware device which produces the physical image of the bar code symbol on paper, photographic film, printing plate, or other substrate, and the associated software which converts the input data into digital instructions used to drive the hardware device. Each component can take many forms and perform differing functions.

Manufacturers of bar code equipment, the producers of bar code symbols and the users of bar code technology therefore require publicly available standard test specifications for bar code digital imaging systems to ensure the accuracy and consistency of performance of these systems. This International Standard is intended to lay down general principles governing the bar code image generation function in each component, supplemented by more specific details applicable to certain major categories of software and hardware.

# Information technology — Automatic identification and data capture techniques — Bar code digital imaging and printing performance testing

## 1 Scope

This International Standard describes the characteristics and defines categories of bar code digital imaging systems, identifies the attributes of each system which are required to be controlled, and specifies minimum requirements for those attributes. It defines test methods for assessing the conformance of those attributes with this International Standard. It is intended to be used in conjunction with International Standards which detail the methodology for assessing the quality of a bar code symbol, such as ISO/IEC 15416. This International Standard does not apply to Bar Code Masters, which are covered by ISO/IEC 15421.

## 2 Normative references

The following referenced documents are indispensable for the application 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 2859-1, *Sampling procedures for inspection by attributes — Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection*

ISO/IEC 15416, *Information technology — Automatic identification and data capture techniques — Bar code print quality test specification — Linear symbols*

ISO/IEC 15420, *Information technology — Automatic identification and data capture techniques — Bar code symbology specification — EAN/UPC*

ISO/IEC 15426-1, *Information technology — Automatic identification and data capture techniques — Bar code verifier conformance specification — Part 1: Linear symbols*

ISO/IEC 19762-1, *Information technology — Automatic identification and data capture (AIDC) techniques — Harmonized vocabulary — Part 1: General terms relating to AIDC*

ISO/IEC 19762-2, *Information technology — Automatic identification and data capture (AIDC) techniques — Harmonized vocabulary — Part 2: Optically readable media (ORM)*