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# Information technology — Automatic identification and data capture techniques — Bar code verifier conformance specification —

## Part 2: Two-dimensional symbols

*Technologies de l'information — Techniques d'identification  
automatique et de capture de données — Spécifications de conformité  
des vérificateurs de codes à barres —*

*Partie 2: Symboles bidimensionnels*

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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 15426-2 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 31, *Automatic identification and data capture techniques*.

ISO/IEC 15426 consists of the following parts, under the general title *Information technology — Automatic identification and data capture techniques — Bar code verifier conformance specification*:

- *Part 1: Linear symbols*
- *Part 2: Two-dimensional symbols*

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## Introduction

The technology of bar coding is based on the recognition of patterns encoded, in bars and spaces or in a matrix of modules of defined dimensions, according to rules defining the translation of characters into such patterns, known as the symbology specification. Symbology specifications may be categorised into linear symbols, on the one hand, and two-dimensional symbols on the other; the latter may in turn be sub-divided into «multi-row bar codes» sometimes referred to as «stacked bar codes», and «two-dimensional matrix codes».

Multi-row bar codes are constructed graphically as a series of rows of symbol characters, representing data and overhead components, placed in a defined vertical arrangement to form a (normally) rectangular symbol, which contains a single data message. Each row of the symbol has the characteristics of a linear bar code symbol and may be read by linear symbol scanning techniques.

Two-dimensional matrix symbols are usually rectangular arrangements of modules placed at the intersections of a grid of two (sometimes more) axes; the coordinates of each module need to be known in order to determine its significance, and the symbol must therefore be analysed two-dimensionally before it can be decoded.

Unless the context requires otherwise, the term «symbol» in this part of ISO/IEC 15426 may refer to either type of symbology.

The symbol, as a machine-readable data carrier, must be produced in such a way as to be reliably decoded at the point of use, if it is to fulfil its basic objective. Standard methodologies have been developed for measuring and assessing the quality of symbols for process control and quality assurance purposes during symbol production as well as afterwards.

Manufacturers of bar code equipment, the producers of bar code symbols and the users of bar code technology require publicly available standard conformance specifications for measuring equipment applying these methodologies, to ensure the accuracy and consistency of performance of this equipment.

This part of ISO/IEC 15426 is intended to be similar in technical content (*mutatis mutandis*) to the linear bar code verifier conformance standard, ISO/IEC 15426-1, on which it has been based. It should be read in conjunction with the symbology specification applicable to the bar code symbol being tested, which provides symbology-specific detail necessary for its application.