



**International
Standard**

ISO/IEC 15938-18

**Information technology —
Multimedia content description
interface —**

**Part 18:
Conformance and reference
software for compression of neural
networks**

*Technologies de l'information — Interface de description du
contenu multimédia —*

*Partie 18: Conformité et logiciel de référence pour la compression
des réseaux neuronaux*

**Second edition
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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.

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This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*.

This second edition cancels and replaces the first edition (ISO/IEC 15938-18:2023), which has been technically revised.

The main changes are:

- additional conformance bitstreams and an extension of the reference software to cover the features added in ISO/IEC 15938-17:2024.

A list of all parts in the ISO/IEC 15938 series can be found on the ISO website and IEC websites.

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

This document describes conformance testing and the reference software for ISO/IEC 15938-17. The reference software includes both encoder and decoder functionality.

The reference software is useful in aiding users of a standard for coding neural networks to establish and test conformance and interoperability, and to educate users and demonstrate the capabilities of the standard. For these purposes, the accompanying software is provided as an aid for the study and implementation of ISO/IEC 15938-17.

The purpose of this document is to provide the following:

- A set of reference bitstreams conforming to ISO/IEC 15938-17.
- Description of procedures to test conformance of bitstreams and decoders to ISO/IEC 15938-17.
- Reference decoder software capable of decoding bitstreams that conform to ISO/IEC 15938-17 in a manner that conforms to the decoding process specified in ISO/IEC 15938-17.
- Reference encoder software capable of producing bitstreams that conform to ISO/IEC 15938-17.

Information technology — Multimedia content description interface —

Part 18:

Conformance and reference software for compression of neural networks

1 Scope

This document specifies conformance testing procedures for implementations of ISO/IEC 15938-17 and provides conformance bitstreams. It also provides the reference software for ISO/IEC 15938-17 which is an integral part of this document.

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 15938-17:2024, *Information technology — Multimedia content description interface — Part 17: Compression of neural networks for multimedia content description and analysis*