

---

---

**Information technology — JPEG XL  
image coding system —**

**Part 4:  
Reference software**

*Technologies de l'information — Système de codage d'images JPEG  
XL —*

*Partie 4: Logiciel de référence*



This document is a preview generated by ELS



**COPYRIGHT PROTECTED DOCUMENT**

© ISO/IEC 2022

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](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland

# Contents

	Page
Foreword.....	iv
<b>1 Scope.....</b>	<b>1</b>
<b>2 Normative references.....</b>	<b>1</b>
<b>3 Terms and definitions.....</b>	<b>1</b>
<b>4 Reference software.....</b>	<b>1</b>
4.1 General.....	1
4.2 Examples of use.....	2
4.3 Access.....	2
4.4 Dependencies.....	3
<b>5 Usage instructions.....</b>	<b>3</b>

## 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)).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)) or the IEC list of patent declarations received (see <https://patents.iec.ch>).

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](http://www.iso.org/iso/foreword.html). In the IEC, see [www.iec.ch/understanding-standards](http://www.iec.ch/understanding-standards).

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*.

A list of all parts in the ISO/IEC 18181 series can be found on the ISO 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](http://www.iso.org/members.html) and [www.iec.ch/national-committees](http://www.iec.ch/national-committees).

# Information technology — JPEG XL image coding system —

## Part 4: Reference software

### 1 Scope

This document provides reference implementations of ISO/IEC 18181-1 and ISO/IEC 18181-2. The software supports lossless and lossy compression of images and image sequences for a wide range of use cases such as (but not limited to) images with wide colour gamut and/or high dynamic range and responsive web images. This document includes source code and instructions for compilation and usage.

### 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 18181-1, *Information technology — JPEG XL image coding system — Part 1: Core coding system*

ISO/IEC 18181-2, *Information technology — JPEG XL image coding system — Part 2: File format*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 18181-1 and ISO/IEC 18181-2 apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

### 4 Reference software

#### 4.1 General

The purpose of this document is to provide the following:

- Reference decoder software capable of decoding codestreams that conform to ISO/IEC 18181-1 and files that conform to ISO/IEC 18181-2.
- Reference encoder software capable of producing codestreams that conform to ISO/IEC 18181-1 and files that conform to ISO/IEC 18181-2.

The use of the reference software is not required for making an implementation of an encoder or decoder in conformance to ISO/IEC 18181-1 or ISO/IEC 18181-2. Requirements established in ISO/IEC 18181-1 and ISO/IEC 18181-2 take precedence over the behaviour of the reference software.