



This is a preview - [click here to buy the full publication](#)

International Standard

ISO/IEC 18181-2

Information technology — JPEG XL image coding system —

Part 2: File format

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

Partie 2: Format de fichiers

**Second edition
2024-06**

This is a preview - click here to buy the full publication

ISO/IEC 18181-2:2024(en)



COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2024

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
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 General	2
5 File organization	2
6 Data types and numerical values	3
7 Graphical descriptions	3
8 Binary format of a box	4
9 Box types	4
9.1 JPEG XL Signature box.....	4
9.2 File Type box.....	5
9.3 Level box.....	5
9.4 JUMBF box.....	5
9.5 Exif box.....	5
9.6 XML box.....	6
9.7 Brotli-compressed box.....	6
9.8 Frame Index box.....	6
9.9 JPEG XL Codestream box.....	7
9.10 JPEG XL Partial Codestream box.....	7
9.11 JPEG Bitstream Reconstruction Data box.....	8
Annex A (normative) JPEG Bitstream Reconstruction procedure	11
Annex B (normative) JPEG XL Media Type registration	15
Bibliography	17

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 or www.iec.ch/members_experts/refdocs).

ISO and IEC draw attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO and IEC take no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO and IEC had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents and <https://patents.iec.ch>. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

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. In the IEC, see 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*.

This second edition cancels and replaces the first edition (ISO/IEC 18181-2:2021), which has been technically revised.

The main changes are as follows:

- Cross-references to ISO/IEC 18181-1 are updated to match its second edition;
- The JPEG bitstream reconstruction procedure was moved to [Annex A](#) and revised to improve clarity;
- [Annex B](#) was added, specifying the `image/jx1` media type registration.

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 and www.iec.ch/national-committees.

Information technology — JPEG XL image coding system —

Part 2: File format

1 Scope

This document specifies the transport and container formats for JPEG XL codestreams as specified in ISO/IEC 18181-1. This document specifies how to add metadata and extensions to JPEG XL codestreams. A file as described by this document is called a JPEG XL file.

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 18181-1:2024, *Information technology — JPEG XL Image Coding System — Part 1: Core coding system*

ISO/IEC 10918-1:1994, *Information technology — Digital compression and coding of continuous-tone still images: Requirements and guidelines*

ISO/IEC 19566-5, *Information technologies — JPEG systems — Part 5: JPEG universal metadata box format (JUMBF)*

IETF RFC 7932, *Brotli Compressed Data Format*¹⁾

1) <https://www.rfc-editor.org/info/rfc7932>