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**Information technology — High  
efficiency coding and media delivery  
in heterogeneous environments —**

**Part 12:  
Image File Format**

*Technologies de l'information — Codage à haute efficacité et livraison  
des médias dans des environnements hétérogènes —*

*Partie 12: Format de fichier d'image*





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ISO copyright office  
Ch. de Blandonnet 8 • CP 401  
CH-1214 Vernier, Geneva, Switzerland  
Tel. +41 22 749 01 11  
Fax +41 22 749 09 47  
copyright@iso.org  
www.iso.org

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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.

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 ISO documents 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)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO 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)).

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For an explanation on 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 the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

The committee responsible for this document is ISO/IEC JTC 1, *Information technology, SC 29, Coding of audio, picture, multimedia and hypermedia information*.

A list of all parts in the ISO/IEC 23008 series can be found on the ISO website.

## Introduction

The Image File Format is designed to enable the interchange of images and image sequences, as well as their associated metadata. It forms part of a family of specifications that are box-structured and is built using tools defined in the ISO base media file format. This document specifies both structural brands that can be used with any codec and brands specific to High Efficiency Video Coding (HEVC). The file format specified in this document is referred to as the High Efficiency Image File Format (HEIF). When the requirements of the HEVC-specific brands are obeyed, the file format can be referred to as the HEVC Image File Format.





# Information technology — High efficiency coding and media delivery in heterogeneous environments —

## Part 12: Image File Format

### 1 Scope

The formats defined in this document enable the interchange, editing, and display of images, as well as the carriage of metadata associated with those images.

The Image File Format builds on tools defined in ISO/IEC 14496-12 to define an interoperable storage format for a single image, a collection of images, and sequences of images.

This document specifies brands for the storage of images and image sequences conforming to High Efficiency Video Coding (HEVC).

NOTE The storage of HEVC video sequences is out of scope and is handled by ISO/IEC 14496-15.

This format defines normative structures used to contain metadata, how to link that metadata to the images, and defines how metadata of certain forms is carried.

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

ISO/IEC 14496-10, *Information technology — Coding of audio-visual objects — Part 10: Advanced Video Coding*

ISO/IEC 14496-12:2015, *Information technology — Coding of audio-visual objects — Part 12: ISO base media file format*

ISO/IEC 14496-15, *Information technology — Coding of audio-visual objects — Part 15: Carriage of network abstraction layer (NAL) unit structured video in the ISO base media file format*

ISO/IEC 23008-2:2015, *Information technology — High efficiency coding and media delivery in heterogeneous environments — Part 2: High efficiency video coding*