International Standard

ISO/IEC 23090-15

Information technology — Coded representation of immersive media —

Part 15: Conformance testing for versatile video coding

Technologies de l'information — Représentation codée de média immersifs —

Partie 15: Essai de conformité pour le codage vidéo polyvalent

Third edition
2026-08

Reference number
ISO/IEC 23090-15:2026(en)

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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

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Foreword

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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*, in collaboration with ITU-T Study Group 21 (as Rec. ITU-T H.266.1).

This third edition cancels and replaces the second edition (ISO/IEC 23090-15:2024), which has been technically revised.

The main changes are as follows:

— addition of bitstreams for the Multilayer Main 10 profile.

A list of all parts in the ISO/IEC 23090 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.

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Information technology — Coded representation of immersive media —

Part 15: Conformance testing for versatile video coding

1 Scope

This document specifies a set of tests and procedures designed to indicate whether encoders or decoders meet the requirements specified in Rec. ITU-T H.266 | ISO/IEC 23090-3.

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.

Rec. ITU-T H.266 | ISO/IEC 23090-3:2024, *Information technology – Coded representation of immersive media– Part 3: Versatile video coding*

Rec. ITU-T H.266.2 | ISO/IEC 23090-16, *Information technology – Coded representation of immersive media – Part 16: Reference software for versatile video coding*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in Rec. ITU-T H.266 | ISO/IEC 23090-3 and the following 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/

3.1
bitstream
sequence of bits that conforms to specified syntax requirements or sequence of bits to be tested for conformance to such syntax requirements

3.2
decoder
embodiment of a specified decoding process or process to be tested for conformance to such a decoding process specification

3.3
encoder
embodiment of a process that produces a *bitstream* (3.1)

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3.4
reference software decoder
particular *decoder* (3.2) provided as a software package for use as an example available for study, as a potential starting basis for the development of other decoders, as a way of testing *bitstreams* (3.1) for conformance to a decoding process specification, or as a reference for comparison with the behaviour of other decoders

3.5
VVCv1 tools
coding tools included in the Multilayer Main 10 4:4:4 profile of versatile video coding (VVC)

Note 1 to entry: Specified in Rec. ITU-T H.266 | ISO/IEC 23090-3.

3.6
VVCv2 tools
EPP, ERRC, PRRC, ETSRC, and RLSCP coding tools added in the VVC operation range extensions

Note 1 to entry: Specified in Rec. ITU-T H.266 | ISO/IEC 23090-3.

4 Abbreviated terms

AFF	affine motion model
ALF	adaptive loop filter
AMVP	adaptive motion vector prediction
AMVR	adaptive motion vector resolution
BDOF	bi-directional optical flow
BCW	bi-predictive with CU weights
CABAC	context-adaptive binary arithmetic coding
CCALF	cross-component ALF
CCLM	cross-component linear model
CIIP	combined inter/intra prediction
CST	chroma separate tree
CTC	common test conditions
DCT	discrete cosine transform
DMVR	decoder-side motion vector refinement
DPB	decoded picture buffer
DQ	dependent quantization
DST	discrete sine transform
EPP	extended precision processing
ERRC	extended regular residual coding
ETSRC	extended transform skip residual coding

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