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Information technology — JPEG AI learning-based image coding system —

Part 4: Conformance

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INTERNATIONAL STANDARD
ITU-T RECOMMENDATION

Information technology – JPEG AI learning-based image coding system: Conformance

1 Scope

This Recommendation | International Standard specifies the framework, concepts, methodology for testing, and criteria to be achieved to claim conformance to the image coding technology Rec. ITU-T T.840.1 | ISO/IEC 6048-1, known as *Learning-based image coding (JPEG AI)*. It lists the conformance testing procedures.

2 Normative references

The following Recommendations and International Standards contain provisions which, through reference in this text, constitute provisions of this Recommendation | International Standard. At the time of publication, the editions indicated were valid. All Recommendations and Standards are subject to revision, and parties to agreements based on this Recommendation | International Standard are encouraged to investigate the possibility of applying the most recent edition of the Recommendations and Standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards. The Telecommunication Standardization Bureau of the ITU maintains a list of currently valid ITU-T Recommendations.

2.1 Identical Recommendations | International Standards

- Rec. ITU-T T.840.1 (2025) | ISO/IEC 6048-1:2025 – *Information technology – JPEG AI learning-based image coding: Core coding system*.
- Rec. ITU-T T.840.2 (2026) | ISO/IEC 6048-2:2026 – *Information technology – JPEG AI learning-based image coding: Profiling*.
- Rec. ITU-T T.840.5 (2026) | ISO/IEC 6048-5:2026 – *Information technology – JPEG AI learning-based image coding: File format*.

2.2 Paired Recommendations | International Standards equivalent in technical content

- None.

2.3 Additional references

- None.

3 Definitions

In addition to the terms defined in Rec. ITU-T T.840.1 | ISO/IEC 6048-1, the following definitions apply:

3.1 **executable test suite**: Set of executable test cases in the form of codestreams that are input into an implementation under a test.

3.2 **JPEG AI file**: Sequence of bytes encoding an image in the JAI file format specified in Rec. ITU-T T.840.5 | ISO/IEC 6048-5.

3.3 **procedure**: Set of steps which accomplishes one of the tasks which comprise decoding process.

3.4 **test codestream set**: (Sub-)set of codestreams that are input to an implementation under test for a particular test purpose.

4 Abbreviations

In addition to abbreviations in Rec. ITU-T T.840.1 | ISO/IEC 6048-1, the following abbreviations apply:

IUT	Implementation Under Test
MSE	Mean Squared Error
PSNR	Peak Signal to Noise Ratio

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