International Standard

ISO/IEC 6048-2

First edition
2026-06

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

## Part 2: Profiling

Reference number
ISO/IEC 6048-2:2026(en)

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Published in Switzerland

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**INTERNATIONAL STANDARD ISO/IEC 6048-2**
**RECOMMENDATION ITU-T T.840.2**

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

**Summary**

Recommendation ITU-T T.840.2 | ISO/IEC 6048-2 specifies profiling for the image coding technology specified in Recommendation ITU−T T.840.1 | ISO/IEC 6048-1 known as learning-based image coding (JPEG AI).

This Recommendation | International Standard was developed collaboratively by ITU-T Study Group 21 and ISO/IEC JTC 1/SC 29 and is published as common text Rec. ITU-T T.840.2 | ISO/IEC 6048-2.

**History**[1]

| Edition | Recommendation | Approval | Study Group | Unique ID |
|---|---|---|---|---|
| 1.0 | ITU-T T.840.2 | 2026-01-13 | 21 | 11.1002/1000/16658 |

**Keywords**

Decoder, decoder profiles, JPEG AI, learning based image coding, levels, profiles, stream profiles.

[1] To access the Recommendation, type the URL https://handle.itu.int/ in the address field of your web browser, followed by the Recommendation's unique ID.



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The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

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In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

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# CONTENTS

*Page*

1 Scope ..... 1
2 Normative references ..... 1
2.1 Identical Recommendations | International Standards ..... 1
2.2 Paired Recommendations | International Standards equivalent in technical content ..... 1
2.3 Additional references ..... 1
3 Definitions ..... 1
4 Abbreviations ..... 1
5 Conventions ..... 2
5.1 General ..... 2
5.2 Arithmetic operators ..... 2
6 JPEG AI stream profiles, decoder profiles and levels ..... 2
6.1 Main concepts and definitions ..... 2
6.2 Profile and levels overview ..... 4
7 Profiles and levels ..... 4
7.1 General ..... 4
7.2 JPEG AI profiles ..... 4
7.3 Syntax information ..... 6
7.4 Informative notes on tiles configuration ..... 7
7.5 Definition of levels ..... 8

## List of Tables

Table 1 – JPEG AI stream@decoder profile combinations and their specification ..... 5
Table 2 – JPEG AI syntax values to specify the stream and decoder profiles ..... 6
Table 3 – General levels ..... 8

## List of Figures

Figure 6-1 – JPEG AI encoder and decoder framework. ..... 3



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**INTERNATIONAL STANDARD**
**ITU-T RECOMMENDATION**

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

## 1 Scope

This Recommendation | International Standard specifies a subset of the syntax specified in Rec. ITU-T T.840.1 | ISO/IEC 6048-1 via one Main stream profile and three decoder tool subsets as three decoder profiles. It also defines higher bounds on tile and picture sizes via levels of a decoder profile that a conforming decoder implementation shall support, and specifies profiles, each being tailored to certain application domains, and defines the levels of the profiles.

## 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 system: Core coding system*.

### 2.2 Paired Recommendations | International Standards equivalent in technical content

– None.

### 2.3 Additional references

– None.

## 3 Definitions

For the purposes of this Recommendation | International Standard, the following definitions apply:

**3.1** **stream profile**: Subset of the full JPEG AI tool set (or full set) and their syntax that may be used in the coded stream.

**3.2** **decoder profile**: Subset of the full JPEG AI tool set that allows to obtain the decoded image.

All other terms are defined in Rec. ITU-T T.840.1 | ISO/IEC 6048-1.

## 4 Abbreviations

All abbreviations are identical to those in Rec. ITU-T T.840.1 | ISO/IEC 6048-1.



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