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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 33475.2-2024

Replacing GB/T 33475.2-2016

**Information technology - High efficiency multimedia coding -
Part 2: Video**

信息技术 高效多媒体编码 第2部分：视频

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1. Structure and drafting rules for standardization documents" Drafting. This document is Part 2 of GB/T 33475 "Information Technology Efficient Multimedia Coding". GB/T 33475 has been published as follows part.

4. Compliance test;

5. Reference software;

6. Intelligent Media Transport;

7. Image file formats. This document replaces GB/T 33475.2-2016 "Information technology - efficient multimedia coding - Part

2. Video" and GB/T 33475.2- Compared with.2016, in addition to structural adjustments and editorial changes, the main technical changes are as follows:

--- Added the terms "viewpoint", "disparity vector", "inter-view coding", "inter-view motion

vector" (see 3.49, 3.50, 3.51, 3.54), changed The terms "layer", "image", "sample aspect ratio" and "run length" are changed (see 3.13, 3.61, 3.69, 3.72, 2016 edition 3.13, 3.53, 3.61, 3.63);

---Added multi-view profile based on inter-view prediction and 3D profile based on depth map coding (see 6.1.3, 7.1, 7.2, 9.6.3, 9.6.6, 9.6.7, 9.6.8, 9.6.9, 9.6.11, 9.6.12, 9.6.16, Appendix H);

---Added HDR dynamic metadata extension (see 7.1.2.5);

--- Added skip transform quantization technology and lossless 16-bit

4.4.4 profile (see 7.1.7, 8.3.4, 9.7.1, Appendix B);

--- Added general string prediction technology and advanced 8-bit

4.4.4 video profile (see 7.1.9, 7.2, 9.6.9, 9.10, Appendix B.2);

1 Scope

GB/T 33475.2 is the video part of the Chinese high efficiency multimedia coding standard, the codec usually known outside China as AVS2 and its successors. China has developed its own video coding line for reasons that are partly technical and largely strategic, patent licensing on H.265 and H.266 being what it is, and this standard is the normative definition of the format: it is mandated for Chinese terrestrial and cable broadcasting and for a growing part of the domestic surveillance and streaming infrastructure. The document specifies the structure of the coded bitstream, the syntax and semantics of every element in it, the parsing process and the decoding process in full, with two normative annexes on the pseudo start code method and on the profiles and levels. It is a decoder specification in the strict sense: a conforming decoder is one that produces the output this document says it must. The 2024 edition replaces GB/T 33475.2-2016. For a chipset vendor, a set-top box or camera maker, or anyone implementing or verifying the format, this is the authoritative text.

This document specifies the decoding process for a highly efficient video compression method that accommodates a wide range of bit rates, resolutions, and quality requirements. This document is suitable for applications such as television broadcasting, digital movies, Internet TV, Internet video, video surveillance, real-time communication, digital storage media, etc. Encoding and decoding of video.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document. GY/T 155-2000 Video parameter values for production and exchange of

high-definition television programs ISO 11664-1/CIES014-

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 B picture In inter-frame prediction, images are decoded using past and future reference images in display order.

3.2 reserved Some specific syntax element values.

Note. For future extension of this document.

3.3 Transform coefficient transformcoefficient A scalar in the transform domain.

3.4 coding unit It includes a luminance coding block and a corresponding chrominance coding block, which are divided by the maximum coding unit.

3.5 codingblock The $M \times M$ sample value block is obtained by dividing the maximum coding block.