MPEG-2 Quick Reference

The grandfather of digital TV — what to know in 2026

Companion to article 3.3 of Block 3 (Codec Evolution). Print on A4 or US Letter. Fora Soft - 250+ shipped video projects since 2005

MPEG-2 / ISO/IEC 13818 — the parts you meet

Part 1 (H.222.0)	Systems - MPEG-2 Transport Stream container, 188-byte packets
Part 2 (H.262)	Video - the codec itself, 16x16 macroblocks, 8x8 DCT, I/P/B frames
Part 3	Audio - backward compatible MPEG-1 Layer I/II/III extension
Part 7	AAC - Advanced Audio Coding, non-backward-compatible new design

Profile @ Level — what actually shipped

Profile @ Level	Max resolution	Max bitrate	Shipped in
MP @ ML (Main / Main)	720 x 576 @ 25 fps	15 Mbps	DVD, SD digital TV
MP @ HL (Main / High)	1920 x 1152 @ 60 fps	80 Mbps	First-gen HDTV (ATSC HD, DVB-S HD)
422P @ ML	720 x 608 @ 30 fps	50 Mbps	Sony IMX, MPEG IMX studio
422P @ HL	1920 x 1080 @ 60 fps	300 Mbps	HD broadcast contribution

Compression efficiency vs newer codecs (same picture quality)

Codec	Year	Bitrate vs MPEG-2
MPEG-2 (H.262)	1995	100% (baseline)
H.264 / AVC	2003	~ 50% of MPEG-2
H.265 / HEVC	2013	~ 25% of MPEG-2
AV1	2018	~ 17% of MPEG-2
H.266 / VVC	2020	~ 12% of MPEG-2

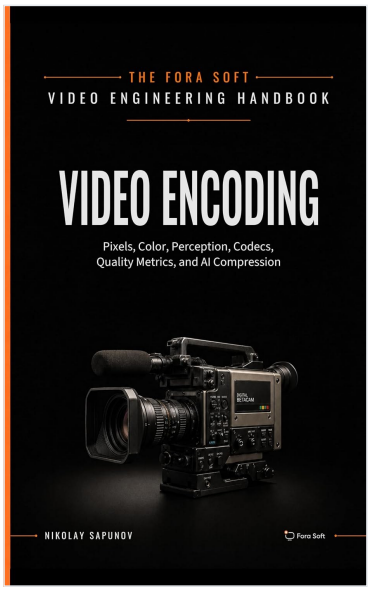
Numbers are lab BD-rate at matched perceptual quality. Real-world savings are typically 2/3 to 3/4 of headline.

Patent status in 2026

- Last US MPEG-2 patent expired 23 February 2018.
- Worldwide effective expiry by January 2024 (Via LA). Only Malaysia remains active until 2035.
- You can ship MPEG-2 encoders and decoders with no royalty in every major commercial market.
- Audio (AAC) and DRM are separate licensing chains - clear those before declaring a product royalty-free.

Where MPEG-2 is still on the shortlist in 2026

- **Broadcast ingest and contribution** - any pipeline touching traditional TV, even when video inside TS is newer.
- **Long-lived embedded fleets** - hotel TV, hospital displays, signage, in-flight, older surveillance.
- **Archival masters** - public broadcasters and national archives keep MPEG-2 as a preservation format.
- **Sub-second contribution links** - MPEG-2's low encode latency beats H.264, HEVC, VVC for OB-van workflows.



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This sheet covers the MPEG-2 parts, profiles and levels, patent status and where it still belongs in 2026. Volume 1 starts from the design MPEG-2 established and follows it through H.264, HEVC and AV1: macroblocks, the DCT, motion compensation, and how each generation saves bits.

WHAT YOU WILL FIND INSIDE

- Macroblocks, DCT and I/P/B frames
- How H.264, HEVC and AV1 improve on MPEG-2
- Transport stream basics for broadcast
- Matched-quality comparison with BD-rate

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Still running MPEG-2 in a broadcast or embedded product?

We will review where MPEG-2 still earns its place, plan a migration path for the rest and keep legacy devices working. 250+ video products shipped since 2005.

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